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SOUTH AMERICA

SOCIAL, INDUSTRIAL, AND POLITICAL

FRANK G. CARPENTER

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PRETTY GIRLS OF CHILE

SOUTH AMERICA

Social, Industrial, and Political

A TWENTY-FIVE-THOUSAND-MILE JOURNEY IN
SEARCH OF INFORMATION

*in the Isthmus of Panama and the Lands of the Equator,
Colombia, Ecuador, Peru, Bolivia, Chile, Tierra del Fuego,
the Falklands, Argentina, Paraguay, Uruguay, Brazil,
the Guianas, Venezuela, and the Orinoco Basin : : :*

THE RESOURCES AND POSSIBILITIES OF THE VARIOUS COUNTRIES—
THE LIFE AND CUSTOMS OF THE PEOPLE—THEIR GOVERN-
MENTS, BUSINESS METHODS, AND TRADE

BY

FRANK G. CARPENTER

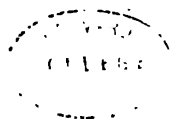
Author of "THROUGH ASIA," and "THROUGH NORTH AMERICA"

Fully Illustrated

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PREFACE

HE present volume is the outcome of a journalistic expedition to South America in search of information for the American business man and the general reader. The journey occupied about a year of constant travel, during which the author visited the various countries, spending some time in their capitals and ports, and making many journeys into the interior.

During his travels the author wrote letters for many of the leading newspapers of the United States, and at the same time prepared the notes which form the basis of this book. His aim has been to take the reader as far as possible through the scenes described, and for this reason the matter is, in the main, given as it was penned on the ground.

The work is more a study of the commercial and social life of the cities, and a description of how the people live and work in the country, than a diary of travel and adventure. It describes the chief industries, notes the characteristic features of the inhabitants, discusses the resources and possibilities of the various countries, and incidentally points out the chances for the investment of American capital and the increase of American trade.

These matters, however, are discussed from the standpoint of human interest and for the average reader, the aim being to give a plain, simple narrative, conveying the information about South America most desired at the present time. The author has as far as possible verified all statements of facts; but many of the

South American republics are lamentably lacking in accurate statistics, and in order to secure information the traveller has to rely to a large extent upon personal interviews. The various so-called authorities on South America are now of little value, for the continent is rapidly changing, and what was true of its people and condition a few years ago may not be so now.

In his work the author has received assistance from so many sources that it is impossible for him to render proper thanks to all. He wishes, however, to express his gratitude to our Cabinet Ministers at Washington, to the General of the United States Army, and to other officials, for letters of introduction which opened to him the government sources of the South American republics, and also to our Ministers and Consuls stationed at the various ports and cities of South America for putting themselves at the author's disposal and materially assisting him in the collection of information. He also tenders his thanks to the Presidents of the various South American republics and their officials for many courtesies and favours, and also to the people of South America generally, for their very cordial treatment of him, a stranger in their lands.

THE AUTHOR.

WASHINGTON, D. C., February, 1900.

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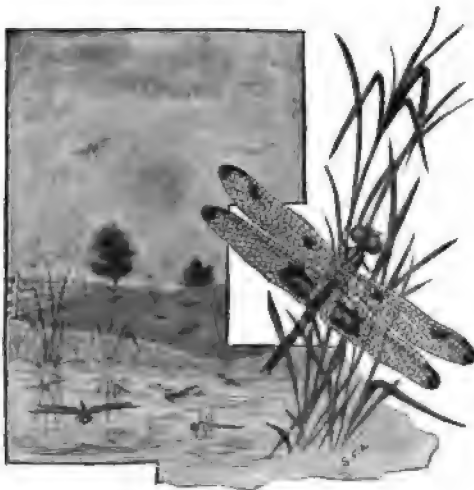
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VENEZUELA, AND THE ORINOCO BASIN

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CHAPTER I

FROM NEW YORK TO PANAMA

A WINTER SAIL OVER THE CARIBBEAN SEA ON AN AMERICAN STEAMER—A NEW USE FOR THE GULF STREAM—LANDING AT COLON—ITS HOSPITALS AND ITS CEMETERIES—A GRAVEYARD OF FOREIGNERS—THE TERRORS OF THE ISTHMUS.

I AM in the city of Colon, on the eastern shore of the Isthmus of Panama. The emerald waves of the Caribbean Sea, coming in with the tide, are dashing up a silvery spray at my feet. A row of tall palms runs between me and the beach, each tree loaded with bunches of green cocoanuts, every one of which is as big as the head of that naked negro baby who is playing there on the edge of the water.

The air a little back from the shore is that of a hot July at home, but here there comes in from the sea a breeze which is soft, cool, and delicious. When I left New York a week ago, I had to wade through the snow to the steamer; here my surroundings are those of midsummer. I am in a land of the tropics.

The distance from New York to Colon is 2,000 miles, and the trip took just seven days. Our steamer was the *Advance*, one of the three boats of the Panama Railroad and Steamship Company, the only line which plies regularly between New York and the Isthmus of Panama. It was a steady little vessel of 2,700 tons, only about one-fourth the size of the great ocean greyhounds of the Atlantic; but it had all the modern improvements, and my corner cabin on the promenade deck had two large windows, which gave me a cool breeze day and night.

We had the satisfaction of sailing under the American flag. Although the Panama Railroad and Steamship Company practically belongs to the French, it is managed and officered by Americans, and on the *Advance* even the sailors were full-blooded Yankees. Most of the passengers were citizens of the United

States; some on a pleasure trip to San Francisco *via* the Isthmus, others *en route* for the gold mines of Peru and Bolivia, others again were commercial travellers starting out to buy goods and take orders in South America. We had also on board a bishop and a party of missionaries of the Methodist Episcopal Church. The missionaries were to be teachers in the schools of Chile and Peru, while the bishop was on a tour of mission inspection. In addition to these, there were some Frenchmen, Germans, and Spaniards. The Frenchmen were Parisians about to inspect the work of the Panama Canal. The Germans were coffee-planters from Guatemala returning home from their vacations in Europe; and the Spaniards were business men engaged in the Pacific coast trade.

The party was a pleasant one, and the life of it was the bishop. He was a mine of humour, stories, and valuable information. It was he who, as we passed Cape Hatteras, told us that we were in the Gulf Stream, that wonderful river of the ocean which carries the hot water of the tropics across the Atlantic to Great Britain and Ireland, and makes them habitable. As we crossed the stream, the bishop recalled the story of the Yankee sea captain who, when denouncing England for its sympathy with the South during our Civil War, said:

"You English had better look out, for Uncle Sam has you at his mercy. If you are not careful, President Lincoln, when he has settled this trouble with the South, will send down our army and cut a channel through the Isthmus of Panama, which will turn the Gulf Stream into the Pacific Ocean and thus freeze your two little islands into icebergs."

It was also the bishop who sprang this riddle upon the ship's party: "Who was the loneliest scholar in the geography class? The answer was: "The little girl who could not find Pa-nor-Ma" (Panama).

As we crossed the Gulf Stream the air grew perceptibly warmer, and as we sailed on its outer edge down toward the Caribbean Sea we soon came into summer heat. We passed the island of San Salvador, where Columbus first landed after his thirty-five days' voyage from Spain, in a vessel which was not more than one-thirtieth as large as ours. The morning following we saw the lighthouse of Bird Rock Island, one of the Bahamas, rising



AVENUE OF PALMS, COLON (ASPINWALL), COLOMBIA

out of a grove of palm trees; and a day later the bleak hills of eastern Cuba came into view. We steamed over the waters where our gunboats lay off Santiago when they sunk the Spanish fleet; we sailed for hours in sight of the blue mountains of Haiti, and then passed into the blue Caribbean, seeing nothing but flying fish, nautili, and gulls, until we neared the Isthmus of Panama.

I shall never forget our first sight of the Isthmus, that wonderful strip of earth and rock which blocks the commerce of the world in tying the continents of North and South America together. At first there was only a thin hazy line of blue on the western horizon. Then the blue deepened; low hills rose out of the mist and piled themselves one on top of another; little islands floated up out of the water along the shore; and a little later we were in sight of the low houses and wharves of Colon, the great palm trees above them shaking their fan-like leaves and apparently waving a welcome to the Isthmus of Panama.

As we came to anchor, a crowd not unlike that on the wharves of New Orleans gathered about the ship. It was composed of negroes and mulattoes, in all stages of raggedness. There were a few native Colombians, who jabbered at us in Spanish; and there were several Americans in the employ of the steamship company; but the rest were negroes and mulattoes from Jamaica. They addressed us in English with a cockney accent, and offered their services as guides through Colon.

Colon is the chief city on the Caribbean side of the Isthmus of Panama. It is at the terminus of the railway across the Isthmus, on the site of old Aspinwall. The town was rebuilt at the time of the commencement of the Panama Canal, with the idea that it would become a mighty city as soon as the canal was completed. Many of its houses were constructed in the United States and brought here in pieces. Palaces were erected for Ferdinand de Lesseps and his son, and about them a city was laid out on a grand scale. An iron market-house, large enough for a town of half a million inhabitants, was put up, and along the wide streets lines of cocoanut trees were planted. Then began the work of dredging out the land at what was to be the eastern end of the huge ditch which was to join the two oceans. Tens of thousands of workmen were employed, and money flowed like water.

Such was the condition in the early eighties. To-day Colon is as ragged as any town on the hemisphere. Its beautiful cot-

tages, weather-beaten and rotten, are falling to pieces. Its iron market-house is peppered with holes eaten by rust, and the palaces of the De Lesseps are dilapidated. Everything about it is the picture of ruin, especially at the mouth of the canal, where tons of cars, dredges, and other valuable machinery are rotting away.

Colon has now about 5,000 people, made up largely of the remains of the vast number who came to work on the canal. They are Jamaicans and Colombians, with a smattering of Chinese. The town has some business as the terminus of the railroad, but the French have apparently given up their idea that it will ever be a great city. Its future depends entirely upon the completion of the canal.

Colon is notoriously unhealthful. I venture to think there is not a man living in it to-day who has not been afflicted with fever, and it is significant that its chief sights are a fine hospital and a well-filled cemetery on Monkey Hill.

This part of the Isthmus is in fact a veritable graveyard of foreigners. The excavations for the canal and the railroad were made through the miasmatic swamps of the Chagres river, where the very air breathes death. It is said that there was a death for every cartload of earth which was moved in making the excavations. Away back in the fifties, when the railroad was built, a regular funeral train was needed to carry the dead. They were buried in pits, being laid crosswise, one on top of the other, and stacked up as it were like cord-wood. It is said that during the construction of the railroad, there were more deaths than there are ties in its track.

Among the labourers on the road were about 1,000 Chinese, who were imported because it was thought they could stand the climate. Many of them died within a month, and so many of the remainder committed suicide that one of the stations at which they were working was called "Matachin," or Dead Chinaman.

Even in the quiet of to-day, when Colon is more healthful, the air is full of reminiscences of the fevers and horrors of the past. The terrors of the region have even gone into poetry, as the following, written by an American in the employ of the Panama Railway Company, will testify:

BEYOND THE CHAGRES

BEYOND the Chagres river
Are paths that lead to death;
To fever's deadly breezes —
To malaria's poisonous breath!
Beyond the tropic foliage,
Where the alligator waits,
Is the palace of the devil —
His original estates.

Beyond the Chagres river
Are paths fore'er unknown,
With a spider 'neath each pebble,
A scorpion 'neath each stone!
'Tis here the boa constrictor
His fatal banquet holds,
And to his slimy bosom
His hapless victim folds.


Beyond the Chagres river
Lurks the panther in his lair,
And ten hundred thousand dangers
Are in the noxious air.
Behind the trembling leaflets,
Beneath the fallen reeds,
Are the ever-present perils
Of a million different breeds.

Beyond the Chagres river,
'Tis said — the story's old —
Are paths that lead to mountains
Of purest virgin gold;
But 'tis my firm conviction,
Whatever tales they tell,
That beyond the Chagres river
All paths lead straight to hell!

CHAPTER II

ACROSS THE ISTHMUS BY RAILROAD

THE STORY OF THE PANAMA RAILROAD, WHICH HAS MADE FORTUNES FOR ITS OWNERS—IT CHARGES THE HIGHEST FARES AND PAYS DIVIDENDS OF MILLIONS—THE SCENERY OF THE ISTHMUS—THE CHAGRES RIVER—A LOOK AT THE CITY OF PANAMA—ITS ODD SOCIAL CUSTOMS—ITS LOTTERY AND ITS BULL-RING.

 HE railroad which crosses the mountains from Colon to the city of Panama, connecting the Atlantic and Pacific oceans, is perhaps the best-paying railroad in the world. It has made fortunes for its owners in the past, and its receipts are still far in excess of its expenditure. It has an absolute monopoly of all railroad rights on the Isthmus of Panama, and it charges accordingly. What would be thought of paying \$200 for a ride from New York to Boston, \$450 for a first-class ticket from New York to Chicago, \$1,000 to go from the Atlantic to Salt Lake City, or \$1,500 to be carried from the East to San Francisco? Such a rate would be about fifty cents per mile, or a trifle less than what the Panama Railway Company received for every passenger it carried during more than thirty years.

The length of the road is forty-seven miles, and the fare until 1889 was twenty-five dollars in gold. At present all through passengers to Panama on the New York steamers are charged ten dollars in gold for transportation across the Isthmus. The local fare from Colon to Panama is four dollars in gold, but the baggage rate is three cents a pound, and only fifteen pounds are allowed free.

The Panama Railroad is an American institution, although now owned by the French, the majority of the stock having fallen into the hands of the Panama Canal Company. The road was built by Americans, and even now its officials, including the ticket-agents, conductors, and engineers, come from the United States. It is through its concession that the French hold their



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PANAMA CATHEDRAL

right to the canal. The concession was granted in 1850, and it includes all rights of way across the Isthmus of Panama, a country four hundred miles long. No one can make even a waggon road over the Isthmus without the company's permission, and so far no other road of any kind has been attempted.

The original grant gave the company a large amount of public land along the line of the track, and provided that Panama and Colon should be free ports. The original concession was for forty-nine years, but it has since been extended with some modifications to ninety-nine years, during which the company must pay \$250,000 annually to the Colombian government.

The Panama Railroad is a monument to American skill and energy. The difficulties in building it cannot be adequately described. It took five years to construct it, and it had to be cut through one of the most miasmatic of tropical wildernesses. Beginning with Colon, the road runs through the swamps, up the valley of the Chagres, crossing the mountains at an elevation of 268 feet, and then going down to the Pacific at Panama through the valley of the Rio Grande river. It is only forty-seven miles long, and yet it cost more than \$8,000,000.

It was begun when the California gold excitement was at its height, and was able to earn money as soon as the first few miles of track were laid. The travel was so great that, when the road was formally opened in 1855, it had already received more than \$2,000,000 for transportation; and within four years thereafter, its earnings amounted to more than its original cost. It has carried as much as 500,000 tons of freight in a year; and during the twelve years following its completion, \$750,000,000 worth of specie was taken over the road on its way from San Francisco to New York. The freight rates were especially heavy, averaging about \$160 per ton, and the miners were made to pay an extra-baggage rate on their outfits, in addition to their \$25 fare.

I crossed the Isthmus in a special car in company with the superintendent of the road. The roadbed is very smooth, and the track is well kept. It has a five-foot gauge, fifty-six pound rails, and ties of *lignum-vitæ*, which are about the only ties that will withstand the wood-eating ants. *Lignum-vitæ* is so hard that spikes cannot be driven into it, and holes have to be bored for every bolt. It is so hard that the ants, which eat almost

everything wooden, do not attack it. It is on account of the ants that iron telegraph poles are used, and that everything else possible is made of iron.

All the rolling stock of the Panama road comes from the United States. The private observation car of the superintendent was made in Wilmington, while the locomotives are from Philadelphia. The cars are of two classes, first and second. The first-class cars have wicker seats, like those of our smoking cars. The second-class are built like long street cars, with benches running lengthwise under the windows. It is in the second-class cars that the common people ride. Half of their passengers are Jamaica negroes, about one-third of the remainder are Chinese, and the others native Colombians. The Chinese are the neatest and best dressed of the passengers.

During my ride over the road I asked the superintendent as to wages. He told me that they varied considerably, the Americans being paid in gold, and the natives, who are chiefly common labourers, in silver. Engineers get \$157 a month, conductors \$148, and telegraph operators from \$75 to \$100. The native brakemen receive \$1.75 a day in silver, or about sixty cents a day in gold. Common labourers get from thirty-five to seventy-five cents silver a day. Most of the latter are Jamaican negroes. They put in ten hours a day, bringing their first meal of coffee and bread to the track and eating it there. They begin work at six A. M. At eleven o'clock they stop for breakfast, which consists of rice and a bit of dried meat. At one o'clock they are again at work, and at six they quit and go home to dinner.

The ride across the Isthmus of Panama is a delightful one. After you pass the few miles of swamp which line the Atlantic coast, the land rises into wooded hills. There are palm trees here and there amongst the other forest trees. You pass banana plantations, go by villages of thatched huts, about which half-naked children play; and, where the railroad skirts the line of the canal, see on every prominent hill houses which were erected for the petty officials.

A closer look at the vegetation brings new wonders at every turn of the road. You see bread-fruit trees, cotton trees, and at times go through jungles of bamboo. There are more than twenty varieties of bamboo on the Isthmus, and many kinds of palms. There are woods which equal the Siamese teak in beauty



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WASH-DAY ON THE PANAMA ISTHMUS

and hardness, and back from the railroad are forests of mahogany and dye-woods.

Many trees and plants unknown to our physicians are used by the Indians for medicinal purposes. One of these is the cacique tree, a stick of which, if held in the hand, will almost instantly stop the flowing of blood. A bit of cacique dust put upon a cut will cause the blood to stop running; so the Indians believe it to be an infallible cure for internal hemorrhages. Cacique wood looks much like mahogany. It is costly, a piece as big as a walking-stick being worth in Panama \$10 or more.

Another Isthmian tree is an antidote for snake poisoning; and there are plants which are said to cure cancers and tumors. One plant is a powerful emetic, as the experience of an Englishman living in Panama shows. He had heard of this plant and wished to test it. So he asked an Indian girl to make some tea of its leaves for himself and his partner, they agreeing that each would drink a cupful. They did so. The liquor was sweet and was easily swallowed, but it had hardly gone down before both men made a rush for the door. Their stomachs, in the words of the Englishmen, were turned inside out, and they seemed to feel their very heels coming up through their throats.

Panama, the Pacific terminus of the road, is a picturesque little city running about a magnificent bay. The town near the bay makes one think of Venice. The houses hang out so over the water that you involuntarily look for gondolas to go from one to another. Away from the bay the city is more like one in old Spain. Its streets wind in and out, up hill and down. It has a plaza in the centre, about which the principal buildings stand. The houses are built close to the narrow sidewalks. Many of them have *patios*, or courts, within them, and from each second story a balcony hangs out, so that you are protected from the sun as you walk through the city.

Very few of the Panama people own a whole house. Almost all live in tenements, the richer people in comfortable rooms on the upper floors, and the poor on the ground floors and basements. All the stores have dwellings above them, and many well-to-do people live above stores. The doors of the ground-floor rooms are usually open, so that you see all sorts of household arrangements going on as you pass through the streets. Here a woman is combing her hair, there one is sewing, and

a little farther on a third is cutting up beef for the breakfast stew.

The stores are not large. They have no display windows, and the goods are piled up in them without regard to order or show. Most of the trading is by bargaining. There are no fixed prices. You offer about one-half the sum the merchant asks for an article, and usually get it for about two-thirds of his first price.

I arrived in Panama on a Saturday night, and had a chance to see something of a Colombian Sunday. The day opened with the ringing of church bells. There was so much noise that I imagined myself in one of the most pious of cities until I went into the streets. Then I found that the stores were open, and that most of the day was to be given up to amusement and business. It is true that many of the people attended church in the morning; but in the afternoon they devoted themselves to things which would be anything but Sunday-like in the United States.

At two o'clock, for instance, there was a cock-fight, and at four a bull-fight began inside the ruined walls of one of the churches of Panama's past. A large audience of both sexes was present, who cheered and grew wildly excited while five bulls were tortured to death by a band of bull-fighters.

At one o'clock occurred one of the chief events of the day. This was the weekly drawing of the Panama lottery, presided over by the mayor. The lottery is so well patronized that all Panamanians are more or less interested in it, 10,000 tickets being sold each week. The tickets are a dollar each, and the prizes range from \$3,000 downward. There are so many blanks that the lottery makes a big profit. It has a capital of \$200,000, and pays annual dividends of 45 per cent.

I happened to be passing the lottery office at the time of the drawing, and stepped in. A boy of about eight years, who had been picked out of the crowd, stood upon a table, with a revolving wire basket before him. The basket was filled with hollow ivory balls, each of which contained a number ranging from one to ten. The basket was given a whirl, and was then opened for the boy to pick out a ball. The number in the ball chosen gave the figure for the thousands of the prize. The basket was again whirled, and another ball was taken out. The number in this represented the figure for the hundreds; a third

whirl gave the tens, and the fourth the units. The drawing seemed to be fairly done, but there is not more than one chance in five hundred of a ticket-holder drawing anything.

I spent the evening in the plaza, listening to the city band and watching the people who had come out for their usual Sunday promenade. There were many pretty girls among them, but each had an elderly sister, cousin, or aunt with her.

Society in Panama is governed by Spanish etiquette, an inflexible rule of which is that no unmarried woman should ever be left alone with a man. The Panama girl has no moonlight walks or drives with her lover. She dare not receive him at her house, except when the family is present, and when he invites her to go to the theatre or the bull-fight the other ladies of the family are supposed to be included in the invitation. This custom is somewhat surprising to foreigners. One young American, for instance, shortly after his arrival in Panama asked a young lady to go with him to the theatre. When he called for her he found thirteen old and middle-aged women dressed and ready to go with him and his inamorata. His tickets that night cost him more than his weekly salary, and it was only by chance that he happened to have enough money to pay his bill at the box-office.




FRUIT MARKET AT PANAMA

CHAPTER III

THE PANAMA CANAL

A DESCRIPTION OF THIS MIGHTY WORK, WHICH HAS COST A QUARTER OF A BILLION DOLLARS, AND IS NOT HALF DONE—A WALK ALONG THE CANAL—THREE THOUSAND LABOURERS, AND WHAT THEY ARE DOING—THE CANAL SCANDALS, AND HOW DE LESSEPS AND HIS ASSOCIATES STOLE MILLIONS—FORTUNES IN MACHINERY NOW GOING TO WASTE—WILL THE CANAL BE COMPLETED?

ILL the Panama Canal ever be completed? The officials of the new French company which has taken charge of the work say that it will. They have had 3,000 men labouring on it for three years, and in that time a vast deal of dredging and cutting has been accomplished.

During my stay on the Isthmus, I walked over a large part of the canal route. The deepest cutting is to be done at the Culebra tunnel or Pass. Here I found 800 men at work cutting down the mountain, and was told that more than 2,000 were employed within a mile of each side of this point. The scene was a busy one. Long trains of iron cars were carrying their loads of rock and clay from one point to another. Immense steel dredges, each as tall as a two-story house and ten times as big as the largest threshing-machine, were gouging out rock and gravel and carrying them in big iron buckets fastened to endless chains, and pouring them into the cars. Here negroes from Jamaica were drilling holes in the mountain and charging them with dynamite; and from the other side of the hill, a mile away, I could hear the boom, boom, boom of the explosions of another gang.

A little farther on, at the station of Emperador, seven huge dredges were scooping up rock into enormous buckets, which the machinery elevated to trolley lines so arranged that the rock was carried by gravity to the places where it was most needed.



ROUTE OF THE PANAMA ISTHMIAN CANAL (41)

On the Pacific the entrance to the canal is being deepened by dredges; and at different points along the line more or less work is going on. The construction is now in the hands of the new company which was founded after the bursting of the great Panama bubble. This company, I believe, is working honestly, and it has done a vast amount of cutting and dredging with the money it has spent since its organization. Its managers estimate that at least one-third of the canal has been already completed,



EXCAVATING FOR THE PANAMA CANAL

and that they can finish it at an expenditure of a little more than \$100,000,000. Their claims have, however, a questionable foundation.

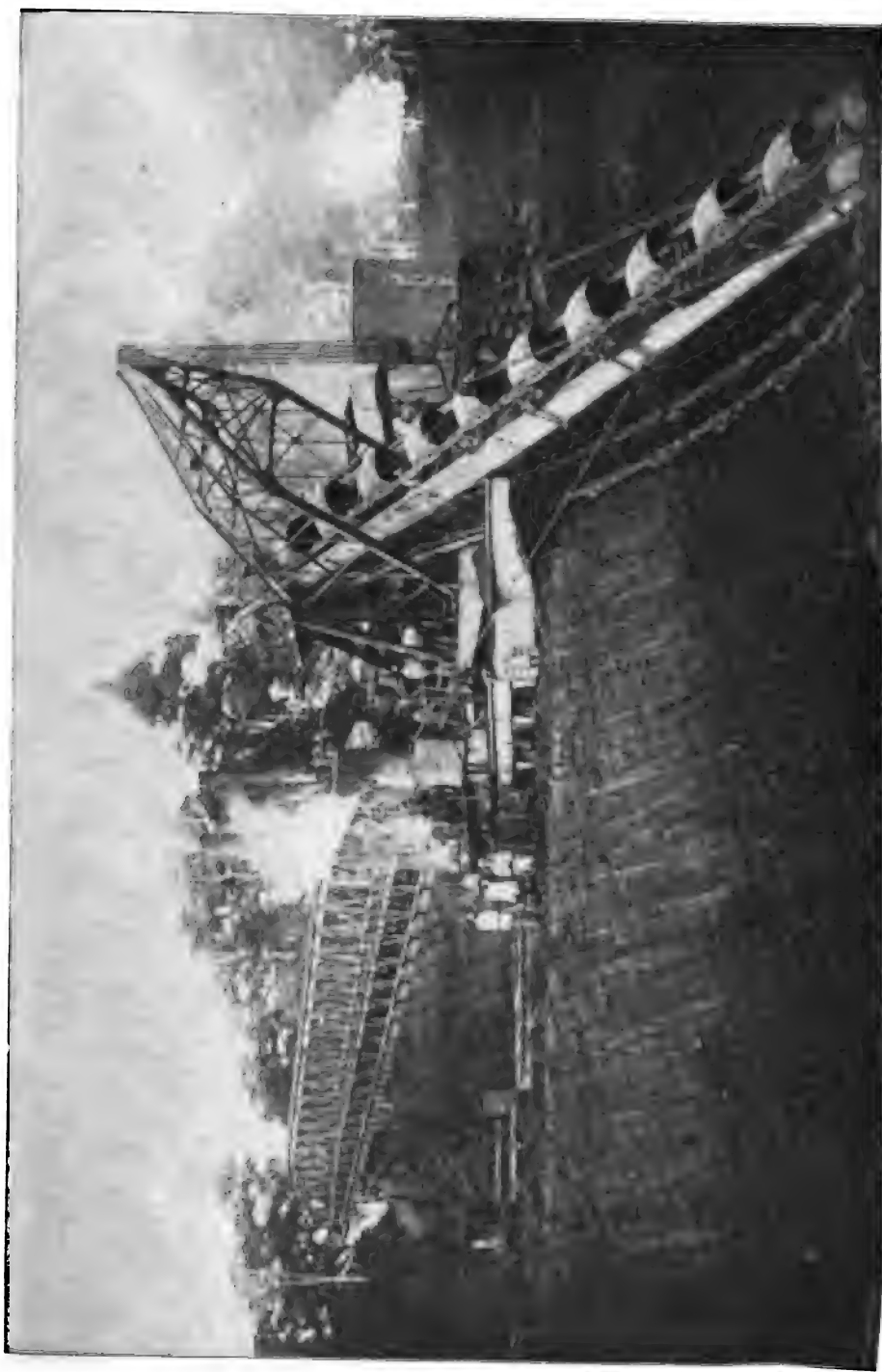
Many people on the Isthmus think they have really no hope of completing the canal, and that they are merely working with the idea that the United States government or some syndicate of capitalists will buy them out. They claim that the Panama route is far superior to the Nicaragua route, and that the United States can never build the canal which it contemplates farther north.

But let me give in a nutshell the story of the canal. It is one of the most remarkable, yet most scandalous, in the annals of civil engineering. First, let us see what has been attempted. The Isthmus of Panama as it lies on the map looks like the neck of an hour-glass, of which North and South America are the globes. It is a neck uniting the two continents, and it is made up of hard rock and of exceedingly stiff soil. It ranges in width from 30 to 180 miles, but it is big enough to block the commerce of the world. If it could be dropped down under the sea, San Francisco would be 10,000 miles nearer to New York, as far as our ships are concerned, and the commerce of Europe and the United States would in large part pass through it on its way to and from Asia.

The Isthmus of Panama is just about as long as the distance between Washington city and Boston *via* New York. A range of low mountains runs through it, and along the coasts are miasmatic swamps and morasses. The distance between the two ends of the canal, as the crow flies, is not more than forty miles; but the canal route winds about so that it is more than forty-five miles in length. It has the advantage of the river valleys of the Chagres on the Atlantic and of the Rio Grande on the Pacific. Where it crosses the Isthmus, there is a pass through the mountains, which is only 1,360 feet high, and the deep cutting which is to be done through this is not more than twelve miles in length.

If the canal should be cut down to sea level, it will be necessary to cut away all this 1,360 feet of rock and earth; but if, as is now contemplated, locks are made, much less cutting will be necessary. Already a large part of the deep cutting and dredging has been done.

On the Atlantic side, for instance, the contract for dredging the Chagres river and constructing some miles of the canal was given to Americans. They employed modern machinery, and opened up the canal for about fourteen miles back from the coast. From six to eight miles have been dredged out on the Pacific side, so that after the mountains are cut through, the excavations from ocean to ocean will be comparatively easy. I examined the work at the Culebra ridge. The rock is soft, and the cutting is by no means an impossibility. It is merely a question of money and labour, and these are the conditions, so the best engineers say, as to all parts of the canal.



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DREDGING MACHINE AT WORK ON THE PANAMA CANAL

One of the great difficulties is the taking care of the water of the Chagres river. The canal will cross the river six times in its course. In dry seasons the Chagres is a sluggish stream, 300 feet wide, and about three feet in depth. When I crossed it on my way over the Isthmus, it seemed little more than a creek. In the wet season it often rises thirty feet in one night; it then becomes a raging torrent, and bears along everything on its floods. This river will have to be held back by a mighty dam, so constructed that the waters can be let out gradually, so as not to injure the canal.

This was one of the problems which De Lesseps proposed to solve when he founded the Panama Canal Company. With his triumph as to the Suez Canal before him, he thought the canal could be easily made. He organized a great association. Stock was issued by the hundreds of millions of francs, and was greedily taken up by the French people. When the money gave out, printing-presses were set to work to make more stock, so that within less than ten years the enormous amount of \$265,000,000 worth of stock and bonds was manufactured and sold.

A large part of this vast sum was spent on the Isthmus of Panama. The French officials poured out money here for years. They bought everything wholesale. When the bubble burst they had on hand among other things, 150 floating derricks, 180 tow-boats and launches, 6,000 iron dumping waggons, 190 miles of railroad track constructed for canal work, and more than 10,000 cars. This plant was scattered along a distance not greater than from Washington to Baltimore: They had, moreover, built beautiful cottages on every hill along the line of the canal. There were 5,000 buildings along the route, some of them costing thousands of dollars. They constructed quarters for 30,000 workmen, and had hundreds of houses made in pieces in the United States and brought to Panama to be put together. Most of these houses are now unoccupied save by negroes, and all are fast going to ruin.

The waste is indescribable. I saw machinery, which must have cost millions, rotting and rusting away. I saw enough car-wheels to equip a trunk line of railroad; and there were so many rotten trucks that if their pieces could be put together, they would make a train reaching half-way across the Isthmus. The officials bought these materials in vast quantities because they made money out of every contract, and the more they bought the more they

made; so when a train ran off the track or rolled down an embankment they let it lie, and ordered more cars.

Those were the days when money was the cheapest of all things on the Isthmus. Gold was more common at Panama than copper is in Montana. Train-loads of it were carried across the Isthmus, and men made fortunes in a lump. Eiffel, the man who built the big tower at Paris, had one contract which netted him \$5,000,000. New York parties had contracts amounting to \$20,000,000. They did honest work, too. Irresponsible engineers took



THE EASTERN END OF THE PANAMA CANAL

all sorts of contracts, and made fortunes. I heard of one man who had been discharged as worthless by a New York contractor. A few weeks later his old employer met him driving about in state with a black valet. Being asked how he had got along, the ex-engineer replied:

"I am rich now. I took a contract to fill a hole along the canal for \$50,000. Another man had a contract to cut down a hill near my hole for \$150,000. We joined hands, and I charged him \$50,000 to put his hill into my hole. The result was that I made \$100,000 without spending a cent."

Another man measured up a part of the Chagres river as a section of his excavation contract, and by collusion with the French accountants received the money. And so the game went on. Everybody was getting rich. The banks made loans at ten per cent. a month. Champagne flowed like water; and Sarah Bernhardt and other actresses were brought from Paris to amuse the canal officials.


At the same time the corruptionists of Paris were sharing the profits. Five million dollars were spent upon the French newspapers, other millions were used to bribe the officials of the French government; altogether more than a quarter of a billion dollars were spent before the owners of the canal stock realized that they were being swindled. The stockholders were chiefly the peasants of France, the most hard-fisted, economical, and accumulative people of Europe. They had come to the assistance of the government at the close of the war with Germany, and had lent it a billion dollars to pay its debt. They had again shown their faith in the so-called great men of France in this canal scheme, but only to find themselves terribly swindled.

If France is ever to finish the canal, it is from the French people that its money must come. Will they respond with the investment of another hundred millions or so when the money is needed? In all probability not. The Panama canal may be built; it probably will be built some day; but that France alone will build it does not seem among the possibilities.

CHAPTER IV

THE WONDERS OF COLOMBIA

AN UNDEVELOPED EMPIRE, STILL UNEXPLORED—A LOOK AT THE CAUCA VALLEY, WHERE AMERICANS ARE NOW SETTLING—A RIVER OF VINEGAR—BOGOTÁ, THE CAPITAL—WHAT COLOMBIA PRODUCES—IT IS A LAND OF GOLD—QUEER FEATURES OF TRAVEL ON THE SOUTHERN PACIFIC—HOW ONE FEELS ON THE EQUATOR.

 I begin this chapter I am on the hottest geographical line on the globe. I am on the deck of the steamship *Santiago*, opposite the coast of Ecuador, almost exactly on the equator, which we shall cross within an hour. If it were not for a slight breeze, which still follows us from the northeast trade winds, the air would be stifling; as it is, the very sea seems to steam. On the right is a vast extent of ocean, which the sun has turned into molten silver. Ten billion diamonds are dancing up and down on the wavelets; and, although I am under cover, the light of the sun as reflected from the water dazzles my eyes as do the direct rays of a July sun at home. On the opposite side of the steamer, in the shadow, the water is of an indigo blue; and as I stand up and look about me I see nothing but a vast expanse of what in the hot, hazy air appears to be a steaming sea. To the westward the Pacific stretches a distance of about 10,000 miles before it reaches the lower part of Asia; to the east is the equatorial region of South America, including the snow-capped Andes and the mighty Amazon, my present field of travel.

It is now three days since I left Panama for Guayaquil, the port of Ecuador, and until this morning we have been sailing by the coast of Colombia, though in many places only 150 miles from the shore. In this way we have saved four or five days of travel, and will make Guayaquil in four days, while the coasting steamers take ten.

The boats of the southern Pacific are far different from those on the northern Pacific. Indeed, they are unlike the steamers of

any other part of the world. The cabins are larger, and the quiet of the sea—for a storm is rare here—allows the ship to have several decks and to keep everything open. There is about a quarter of a mile of walking space on the two upper decks of the *Santiago*, and on the top deck there are places so large that one could almost lay out a croquet ground, and have room to spare.

I awake every morning thinking I am on a farm. There is a bleating of sheep, a crowing of cocks, and a cackling and quacking of geese and ducks. Now and then a cow moos or a pig squeals. We carry all our meat with us. On the upper deck, within ten feet of where I am writing, there are two big coops full of chickens, ducks, and geese. The coops are two-story affairs, walled with slats. The chickens are in the top story, some roosting and others poking their heads out to get at the water and corn in the troughs outside. The ducks and geese are on the ground floor. A little further over there are crates filled with potatoes and onions, and others containing oranges and pineapples. The sheep and cattle are in pens and stalls two floors below. They are in the steerage, near the butcher shops and the kitchens.

These South Pacific steamers, indeed, carry a travelling market with them. There are men who pay big sums for the privilege of selling from the ships to the people at the ports. The marketmen on the *Santiago* had in stock about a dozen waggon-loads of oranges and pineapples from Panama and ten fat beeves from Chile, and they will load up with other things at Guayaquil. They will take this stuff to the ports along the deserts of Peru and Chile, and as nothing grows there they will get high prices.

Travel is very costly on the South Pacific. Two lines of steamers sail between Panama and Valparaiso. One belongs to the Pacific Steam Navigation Company, the other to the Chileans. The two companies have combined, and as they have a monopoly of the business they keep up the rates. I have never paid so much for steamship travel as now. The fare to Guayaquil from Panama is \$67 in gold for a distance of about 800 miles, or more than eight cents a mile. The fares to Europe by the first-class Atlantic liners are not more than three cents a mile, and on some of the boats only two cents or less. The South Pacific lines have steamers every week, north and south from Panama to Valparaiso, a distance of 3,000 miles. The through rate is \$154, but

all passengers are charged extra for stop-overs at the ports, and the local rates are correspondingly higher.

I am surprised at the extent of these South American countries. The republic of Colombia, along which we have been sailing, and of which the Isthmus of Panama forms a part, is longer from north to south than the distance between St. Paul and New Orleans, and wider in some parts than from New York to Chicago. It contains an area of more than 500,000 square miles. It is about one-sixth the size of the United States, without Alaska; and would make more than ten states the size of New York, or twelve as big as Ohio or Kentucky. The Isthmus, or department, of Panama has an area almost four times as large as Massachusetts, and Cauca, one of the Colombian departments, is almost as large as Texas.

I have met a number of Americans and others who have recently travelled in many parts of Colombia. They tell me that the country is an undeveloped empire, and that much of it is as yet unexplored. There are a few Americans in the extreme north, in the Chiriqui lands of the upper Isthmus, raising coffee, and others have been buying lands in the Cauca valley. This valley is over the mountains, a little back of the Pacific. It is several hundred miles long, and about twenty or more miles wide, and is said to have some of the most fertile lands on the globe.

The chief mode of getting about through Colombia is by means of the rivers, and on the mule and donkey paths, which everywhere cross the mountains. No country has more curious streams. One of them is known in Columbia as a river of vinegar. It is the upper part of the Cauca river. The Cauca rises in the southern part of the country, near Ecuador, and after flowing 680 miles north, empties into the Magdalena. In the upper part of its course its water contains eleven parts of sulphuric acid and nine parts of hydrochloric acid in every thousand, and is so sour that no fish can live in it, and it goes by the name of the Rio Vinagre—the Vinegar river.

The Magdalena, the chief river of Colombia, corresponds with our Mississippi. It is more than 1,000 miles long, and is as wide though not so deep as the Mississippi; it cuts the country right in two. Steamers of light draft sail weekly from Barranquilla, on the Caribbean Sea, up the Magdalena to Hondo, where you take mules and climb up to the plain of Bogotá, on which the

Colombian capital is situated. Then there are branches of the Amazon and of other big rivers in Colombia, so that the country is almost as well watered as China. Ten of the little steamers on the Colombia were made at Pittsburg and brought from New York in pieces and here put together.

Bogotá is a city of about 120,000 inhabitants. It has electric lights and a street railroad, which were put in by Americans. It has a university ninety-five years old, a national theatre, a library of 50,000 volumes, an astronomical observatory, and a poor-house. The city is about a half mile higher up in the air than Denver, and its climate is much the same. It is the headquarters of the army, and is the scene of a revolution now and then.


It is at Bogotá that the President lives, and there the Colombian Congress meets. The city is very healthful, as is the greater part of the country where the people live. It is only the coast lands of Colombia that are low, moist, and unhealthy. A short distance back the land rises, and there one finds plains and valleys of vast extent, from 3,000 to 5,000 feet above the sea. Many of these valleys are but sparsely inhabited. They contain good land, and they will sometime support a large population.

Colombia is a land of gold. It is like Alaska in that you cannot wash the soil anywhere along the rivers without finding what miners call "color." I saw men washing the sands in the bay of Panama, and though they said they did not get much, I was told that they have been doing the same work for years. It was here that the Spaniards got some of their first gold; and since the conquest an aggregate of \$700,000,000 worth of the precious metals has been taken out of Colombia. A great deal of mining is now going on in the department of Antioquia, which is reached by going several hundred miles up the Magdalena river. Here small diamonds are sometimes found with the gold. English concerns own the best mines of this region, and much capital is invested.

CHAPTER V

THE LAND OF THE EQUATOR

THE WONDERS OF ECUADOR—TREES THAT WEAVE BLANKETS AND MULES THAT WEAR PANTALETES—THE CURIOUS CITY OF GUAYAQUIL—ITS POLICE AND FIRE DEPARTMENT—WHERE THE TAXES ARE LOW AND THE DEATH-RATE IS HIGH—ECUADOR'S DEBT SLAVES AND HOW THEY ARE OPPRESSED.

HE city of Guayaquil, how shall I describe it? It is one of the strangest mixtures among municipal creations. It lies about forty miles up the wide Guayas river, almost under the shadow of the equator, and is frowned upon by the snowy peaks of Chimborazo and Sangai. Wooded hills surround it, and the moist miasmatic air of the tropics lulls it to sleep. It is a strange combination of the Mediterranean and the Orient. Upon its wharves one is reminded of Naples; back in its business sections you are in a maze of bazaars, much like those of Cairo, Calcutta, or Constantinople. Even its smells smack of the far East. It has streets more slimy than Peking, and some of its customs are as vile as those of Seoul. Its sidewalks are filled with workmen who labor at their trades in the open, with fierce-looking Indians carrying bales and bags upon their backs, and black-haired Indian women peddling goods, who comb the insects from their own and their children's heads, and lunch upon them during the intervals of their sales.

Guayaquil has also its better classes. It has well-dressed business men and beautiful women. The latter usually walk in couples, dressed always in black, with black shawls picturesquely draped about their olive-brown faces. In some parts of the town you find many fine houses built after the Spanish style, with closed balconies extending out from the second story. The balconies are walled with windows, from under whose half-closed shutters dark-eyed beauties look down upon you as you go through the street.

The city has hundreds of donkeys. Here goes one loaded with boards so strapped to its sides that it walks along as if it were between two walls of pine planks. There is another with panniers across its back. The panniers contain loaves of bread, the donkey taking the place of the baker's waggon.

Guayaquil has about 50,000 inhabitants, and its buildings extend along the west bank of the Guayas for a distance of two miles. It is one of the best business points on the west coast of South America. It is the New York of Ecuador, the only commercial port of a country three times as large as Ohio, having a population about the same as Philadelphia. Something like \$10,000,000 worth of goods from the United States and Europe are landed at Guayaquil every year, and millions of dollars' worth of coffee, cacao, hides, and rubber are annually shipped from it to different parts of the civilized world. The Guayas river is so wide and deep that the biggest ocean steamers can sail up to the city, and all the ships which trade along the west coast come to it for goods.

Guayaquil has two banks, one of which pays dividends of 33½ per cent a year. Its stores have stocks worth hundreds of thousands of dollars, and its warehouses are filled with bags of cacao, coffee, and sugar. It has daily newspapers, a tramway, and a line of river steamers; the latter were imported in pieces from the United States.

Guayaquil has an excellent club, at which you will meet as good fellows as anywhere south of the equator. It has numerous priests and a big church facing a beautiful park, where the band plays after worship on Sundays. It is, however, more a city of trade than of religion or pleasure. Its leading people are Italian, English, French, Spanish, and Chinese business men, who are interested only in exports and imports.

The city is so notoriously unhealthful that no one would live in it were it not to make money. I have visited many of the death-holes of the world, but I have yet to find one whose unsanitary condition equals that of Guayaquil. The streets are unpaved. In the dry season they are so filled with dust that the donkeys and mules wear pantalets to keep the gadflies and mosquitoes from eating them up. In the wet season the town is flooded whenever it rains, and between the showers the tropical sun coats the stagnant water in the streets with a sickly green scum.

This is the unhealthy season in Guayaquil—the season of yellow fever and malaria—when death hovers over the town, and the doctors make enough to give them summer vacations in Europe.

Still Guayaquil could easily be made healthful. The town lies between two rivers, and could be drained with a ditch plough so that the tide, which is here very high, would flush it twice a day, but its people let it remain as it is. The result is that every now and then there is a great epidemic. Yellow fever often carries off thousands, and during the rainy season some kind of fever is almost always present.

Guayaquil has no sewers. Its water-works are pit-holes sunk in the streets, into which pumps are inserted on the occasion of a fire. The result is that the city has been burned down again and again. There was a fire last year which consumed half of the houses, causing a loss of more than \$30,000,000. This makes fire insurance extremely high, the current Guayaquil rate being seven per cent per annum on all city property. The American consulate has offices in a three-story building, which pays a yearly insurance of \$4,000; and there are other buildings which cannot get insurance even at the high rate indicated, because the various companies have already written up all the risks they care for in Guayaquil. At the same time the tax on real estate is only three-tenths of one per cent, and the natives would straightway have a revolution if you offered to tax them enough to pave the streets and establish a good fire department.

Guayaquil, however, has a wide-awake police. I know this, for during my first few nights in the city I heard the policemen every fifteen minutes yelling out that they were awake. It is a police regulation that every man on watch shall call out or whistle every quarter of an hour. The cry is, *El sentinel es alerta* ("The sentinel is alert"), and the whistle is a combination more wonderful than anything except the cry of the Guayaquil frog, whose hi-hi-hi is screamed out all night long. The Ecuadorian police are soldiers. They carry swords and guns, and both look and act in the fiercest manner. One of them almost dropped his gun on my foot the other day as I attempted to pass him. He said "Atras!" which I suppose means "Back!" At least I backed, and walked around the other way. I have since learned that no one may pass between the police and the wall, but must go outside. I suppose, if the policeman has to fight, he prefers

to have the wall at his back. Another regulation is that all people out after eleven o'clock p. m. must give an account of themselves. The cry is, "Who goes there?" and the answer must satisfy the police or they will take you to jail.

I doubt, however, whether there is a place in the world where it is so easy to break into jail as here. People are imprisoned for debt, and it is a common thing for a planter who wants hands on his estate to go to the jails and pay the debts of such of the prisoners as will agree to transfer their debts to him and work them out. He then gives them small wages, and takes out perhaps a dollar a week from each man's salary until the debt is paid. In the jail at Bodegas, a town further up the Guayas river, I talked with a Jamaica negro who told me he had been in prison for months because he had failed to pay a millionaire planter sixteen dollars which he had borrowed. Said he: "If I were free I could work to get the money to pay my debt, but they keep me here until some one buys me out, and then I must work for him, or he can put me in again."

But before I go further let me tell something of Ecuador. The name means "equator," and Ecuador is the land of the equator. It lies sandwiched between Colombia and Peru, on the west coast of South America, in the shape of a great fan whose handle extends almost to Brazil and whose scalloped rim is washed by the Pacific ocean. It is one of the least-known countries of the world. Parts of it have never been surveyed, and to-day the geographical estimates of its size range all the way from the bigness of California to that of Texas.

The coast of Ecuador is low. A rich tropical vegetation extends from the ocean back for one hundred miles or less to the foothills of the Andes. The Andes cross the country from north to south in two great parallel ridges, upholding between them a series of beautiful valleys, in which about nine-tenths of the people live. These valleys are from a mile and a-half to two miles above the sea, and give the interior a healthful climate, which is more like that of New York city than the equator.

East of the Andes the country is a tropical wilderness. The Marañon river, a great branch of the Amazon, flows along its southern boundaries, and steamers go up the Amazon, enter the Marañon, and bring you within a comparatively short distance of Quito. In fact, you can come to within four days' mule travel

of Quito by water *via* these great rivers and the streams which flow into them.

Ecuador has some of the highest peaks of the Andes. Scores of its high elevations are always covered with snow, and it has mighty glaciers. Chimborazo, which on clear days is visible at Guayaquil, is 20,498 feet above the sea; the volcano Cotopaxi is over 19,000 feet high; and the great valley of Ecuador is guarded by twenty-one peaks, ranging in height from three to four miles; while there are seventeen other peaks which are more than two miles in height. To-day in Guayaquil the air is filled with ashes which come from one of Ecuador's ten active volcanoes; and every week or so an earthquake makes the ground tremble.

The houses of Guayaquil are built to withstand the earthquakes. They are of timbers so joined and spliced that they sway with the trembling of the earth, and do not break. The framework is covered with bamboo laths, made by splitting the canes; and on these bamboos a coating of plaster is spread. This makes the houses look as though their walls were backed with brick and stone, when, in fact, they are really made up of good-sized fishing-poles. Just now a vast deal of building is going on, and the hammer of the carpenter nailing on laths is always to be heard. Much of the lumber used comes from Oregon and Washington, and some from Georgia.

The equatorial coast region is full of vegetable wonders. In my sixty miles sail from the Pacific up the river Guayas I passed vast meadows as green as Egypt in winter, in which fat cattle, horses, and mules stood up to their bellies in the grass, which they ate without bending over. I passed rich plantations of sugarcane, which here reaches the height of ten feet, and grows for twenty-five years without replanting. I saw cacao orchards loaded down with the fruit from which our chocolate comes, groves of cocoanut palms bearing bushels of green nuts as big as your head, and was offered so many strange fruits that I cannot give their names. They have, for instance, the papaya tree, which bears a fruit as big as a musk melon and of much the same nature. There are other trees which have very large fruit, among them the ivory palm, from which the vegetable ivory of commerce comes. This tree has burrs much the shape of chestnut-burrs, but eight or ten inches thick; and each burr contains a dozen or more nuts, which when green are filled with a soft



jelly-like substance tasting not unlike cocoanut milk. As the nuts grow ripe the pulp hardens to a consistency so tough that it can be used for making buttons, combs, and other similar things.

One of the most peculiar trees of Ecuador has a bark which serves the Indians for clothes. I have a blanket made of it. The blanket is six feet long, and five feet wide, and is as soft and pliable as though it were flannel. It can be rolled up and put into a shawl-strap without hurting it, and yet it is merely a strip of bark from a tree. The Indians make cuttings about the tree, and tear off the bark in sheets. They soak it in water until it is soft, and then pound off the rough outside, leaving the inside perfectly whole. The inside bark is composed of fine fibres so woven by nature that they are not unlike cloth, and are warm enough to serve as a blanket, and soft enough to take the place of a mattress.

CHAPTER VI

THE BANGKOK OF ECUADOR

A RIDE UP THE GUAYAS RIVER TO THE FOOT OF THE ANDES—THE FLOATING TOWN OF BABAHOYO, WHOSE PEOPLE LIVE UPON THE WATER—A VISIT TO THE CACAO PLANTATIONS WHENCE OUR CHOCOLATE COMES—ECUADORIAN FARMING AND ITS ENORMOUS PROFITS—WAGES AND THE COST OF LIVING.

THE Guayas river is to South America what the Columbia river is to North America. It is the biggest stream on the Pacific side of the continent. It is the outlet of a great network of streams which flow down from the Andes and in the rainy season, from December until May, convert much of the country into a vast lake.

We entered the Guayas estuary just opposite the island of Puno, on which Pizarro landed when he started south to conquer Peru; and, skirting this, we came into the Gulf of Guayaquil, which forms the mouth of the river. At this point the estuary is sixty miles wide, and as we sailed up to Guayaquil city we seemed to be passing through an inland sea. The waters were of the colour and thickness of pea-soup. They were spotted with patches of green—great trees and other débris, which they were carrying from the Andes down to the sea. At Guayaquil the Guayas is more than a mile wide, and over twenty-five feet deep. It furnishes a safe harbor for the largest of the South Pacific steamers, and is filled with craft of many kinds, from great ships to the dug-outs, rafts, and cargo boats used by the natives to bring their wares from the interior to the markets.

I left Guayaquil in the little American built steamer *Puigmir* for the town of Babahoyo, which is far in the interior, at the foot of the Andes, where mules are obtained for the highlands on the other side of the mountains. Shortly after leaving Guayaquil we passed the mouth of the Daule river, and a few hours later came into the river Babahoyo, which is the headstream of the Guayas. We sailed up this stream all night, and in the early morning

came to anchor among the floating houses of Babahoyo, the Bangkok of Ecuador. Owing to the floods the houses are built upon piles, and at such times the people practically live upon the water, and go from one place to another in canoes. Only a small part of the town is out of the water, and even there the streets are little better than rivers. On landing I was carried ashore on the shoulders of a half-naked Indian; and it was on bridges of logs that I crossed from street to street. The business section of the town is on a short strip of elevated land, so that the stores are free from water. As you cross the low places, however, you must hug the buildings, and balance yourself on logs.

Babahoyo is so different from an American town that it is difficult to describe it. Its houses are of wood. The larger ones are of two stories, the ground floors being taken up with cave-like stores, and the floors above forming the living quarters of the people. There is nothing in the way of pavements or modern improvements. The town has neither sewers nor gutters. Its only bathroom is a floating shed with holes in its floor, through which you may dip yourself into the river, with the possibility of losing a leg by the nip of an alligator. There is not a fireplace nor chimney in the city. There is not a glass window, the rooms on the second floor are ventilated by a lattice work running around the ceiling. The front walls of the lower stories are movable. They are thrown back in the daytime, so that you can see all that goes on, as in the ground floors of Japan.

The houses of the lower parts of the city are built high upon piles. In dry seasons the ground under them is used for chickens, donkeys, and cattle; in the rainy season, as now, these animals are kept with the family on the second floor, or upon rafts swung to the piles so that they rise and fall with the tide.

To-day there are hundreds of houses which can be reached only in canoes. The children go to school in canoes, and the marketing is done in boats. The poorer houses consist of little more than one room, about six feet square, built upon piles, generally ten feet above the ground, and reached by a ladder outside. The houses are thatched with broad white leaves tied to a framework of bamboo-cane. The floor is of cane, and it has so many cracks that the women do not need to sweep, the dirt of the household falling through to the ground or into the water.

Modern conveniences and sanitary arrangements are practically unknown to the natives of Ecuador. In the houses of the common people there is no privacy whatever; men and women, boys and girls, wives and maidens, all herd together, sleeping in the same clothes they wear in the daytime, lying indiscriminately on the floor, or in the hammocks which form the beds of the country.

The cooking is done in clay pots on a fire-box filled with dirt. The fuel is mainly charcoal, the pots being raised upon tiles or bricks to allow room for the coals underneath. The chief food of the tropical parts of the country is the potato-like tuber known as the "yucca," and plantains, or large bananas. Much rice is used, being cooked with lard, most of which comes from the United States. The people do not seem to know anything of butter, although the country has many fine cattle. Indeed, about the only butter-eaters in Ecuador are foreigners, the butter chiefly sold being Italian, in one and two pound tins. It sells for fifty cents gold a pound, and at this price the profit is small, as the tariff and selling charges are high.

Landing at Babahoyo I was at a loss how to make myself understood by the natives. No one about spoke English, and my Spanish did not seem to be understood. At last, however, I heard that an American lived in the city. This was a Mr. Klein, a carpenter and undertaker. I found him among his coffins. He left his work and devoted himself to me for the day. Together we went to visit one of the biggest plantations of Ecuador, that of Mr. Augustin Barrios, a man who owns thousands of cattle and horses, and who sells hundreds of thousands of pounds of chocolate beans every year. The plantation was then under water, and we had to take a canoe to visit it. Our canoe was about thirty feet long and not over thirty inches wide. It was a dug-out, and was poled and sculled by two lusty brown-skinned gondoliers, one of whom stood at each end of it. Mr. Klein sat in the bottom, and I was given a place in the centre of the canoe, and told to hold myself steady.

Leaving the city we were pushed along through the wide streets of water, between the floating huts, until at last we moved on into the tropical forest. We rowed for miles among the tree tops, now grazing a great black alligator and again chattered at by monkeys who made faces at us as they scampered away. The trees were full of strange birds which fluttered and made cries

as we went by. We got a shot at one, a beautiful thing as big as a pigeon, with a blood-red bill, long legs of a golden yellow, and feathers of royal purple. Later on I shot at an alligator, but the canoe swayed as I stood up in it, and the ugly monster dived down unharmed. There were wild ducks and other birds which I had never seen before, and Mr. Klein told me that he often bags a deer on the highlands and sometimes a wild hog or a jaguar.

The ride was wonderfully beautiful. Under us there were twelve feet of water, where a few weeks before all had been dry land. The trees made a thick arbour-like shade over us, and we wound in and out through their tops, now making our way along a narrow canal of green, and then shooting out into a great green-walled chamber of water, the trees about which were loaded down with orchids, which in New York would be worth many dollars. Insects were plentiful. Bugs and ants of every description fell upon us as we floated onward, and Mr. Klein told me how a boa-constrictor once dropped down into his boat from the branches above. The vegetation of this region is all strange and tropical. There are rubber trees, trees loaded with alligator pears, and here and there a tall palm had hoisted its green head above the others. The silence was almost oppressive. The soft air was heavy with peace and rest, and the ripple of the water as our long canoe worked its way onward invited us to sleep. At one point a canoe with a family of Indians passed us; at another a great cargo-boat, loaded with cacao, was shoved along on its way to market.

Nearly all the country over which we travelled belongs to the millionaire planter. When we left the forest we came directly into the grazing lands of his plantation. The grass was under water, and his herds had been taken to the highlands on the edge of the Andes. He was in a wide waste of waters, above which, here and there, the tops of wire fences were to be seen. We rowed right over the fences, now and then passing tenant houses of bamboo thatched with palm leaves. The houses were built upon piles like those of Babahoyo. Under each, just over the water, was a platform on which the chickens and pigs of the owner lived within six inches of drowning. As we neared the great white house of the planter we saw more and more of these houses. We passed a butcher's shop where the animals which

furnish the meat for the planter are killed. It floated on the water. We went by a great barn upon piles, and sailed over the front gate, amid a lot of steel cacao boats, to the second story of a large three-story building roofed with red tiles, the home of the planter.

We were met at the door by the owner. Our boat was tied to the veranda, and we were at once made at home. Wine and cognac were placed before us, and a breakfast was ordered. While we waited the two pretty daughters of the planter were called in to entertain us, and we drank to the better relations of our countries and continents. Later on the planter sent out an Indian servant to climb one of the cocoanut trees in the back-yard for fresh cocoanuts. He gave us a drink of cocoanut milk, and then sent men with us in canoes to the cacao orchard and other parts of the estate.

During my visit I learned much about cacao and the profits of Ecuadorian farming. The planter told me that he would harvest 300,000 pounds of cacao this year, and that his net profits from this source alone would be about \$30,000. Cacao orchards pay well in Ecuador. There are few plantations which do not net ten per cent annually, and many about Guayaquil bring in from thirty to forty per cent. It costs about three cents of our money to raise a pound of cacao, which sells in Guayaquil for fourteen cents, making a clear profit to the farmer of eleven cents gold per pound. The amount produced here is enormous, about 40,000,000 pounds of cacao beans being annually shipped from Ecuador to Europe and the United States.

Until I came here I had an idea that cacao beans grew on bushes. On the contrary they come from trees from twenty to thirty feet high. The cacao tree is much like a large lilac bush; it is ragged and gnarly. Its fruit, which is bigger than the pomelo, grows close to the stem or trunk. It is of the shape and colour of a lemon, although much larger, and the seeds are the chocolate beans of commerce. Each ball of fruit contains from twenty-eight to thirty seeds about as large as Lima beans. These are washed out of the pulp when the fruit is ripe, and are then dried and shipped to the chocolate factories all over the world.

The cacao trees are grown in orchards. They are planted close together, so that several hundred trees can be grown to

the acre. Cultivated orchards are sold at the rate of sixty cents a tree, but wild land is cheap; and as it is only a matter of five years to bring an orchard into bearing, it is much more profitable for the investor to buy the land and raise the trees.

The first thing is to clear and burn the ground. Then banana plants are set out about ten feet apart to furnish a shade for the young trees, a hill of cacao beans being set midway between each two banana plants. Three beans are put in a hill. They sprout quickly, and during their first few months look like little orange trees. At three years they begin to produce fruit, and at five years each tree should yield from one to two pounds of chocolate beans every year. The care of the orchard is very easy. It is necessary only to keep down the vegetation, for such a thing as hoeing or ploughing a crop is not known in tropical Ecuador.

The greatest trouble of the farmer is the lack of good labour. Señor Barrios told me that he lost a part of his crop every year because he could not get hands to harvest it, and this, notwithstanding the workmen on his plantation were in debt to him to the extent of about \$80,000 in gold. He looked upon this sum as his labour capital, for the debts were to be worked out, and on this account he held back every day a certain proportion of the wages of each of his debt slaves.

It is said that slavery no longer exists in Ecuador. It may not exist as it did in the days of Pizarro, when the Indians were branded, whipped, and killed at the will of their owners; but it is really in force through the debt laws and the customs of the peons, which keep them in debt to their masters. The wages are so low that, once in debt, it is almost impossible to get out. Near the coast peons are paid about eight dollars a month, but in the interior they do not receive over half this, and one-tenth of their earnings goes to the church.

The planters give their labourers twelve ounces of meat, fourteen ounces of rice or beans, and a little lard or salt a day. Each also gets a hat, three coarse cotton shirts, three pairs of cotton pantaloons a year, and a house such as I have already described. Their hours of work are from sunrise to sunset, and if a man skips a day, it is charged to him. The women and children must work as well as the men, and if a man runs away he is put in prison for debt, and stays there until some other

planter is willing to pay him out and take him into his service. Even should a man get out of debt, the conditions are such that he is soon in again. If there is a death in his family, he has to borrow money to bury his dead. If he would be married, the priests will charge him six dollars for performing the ceremony; and if he wants a hog or a donkey, it is only by going into debt that he can get one. As to marriage, he usually prefers living without the ceremony to paying the marriage fees, and to-day it is said that, on this account, seventy-five per cent of the births in Ecuador are illegitimate.


Wages in Guayaquil and along the coast are much higher than in the interior. In the cities common workmen get seventy-five cents a day; carpenters, a dollar and a-half or two dollars; masons, painters, and blacksmiths about the same, and men servants employed by the month, from \$10 to \$12, with board. Women receive from \$6 to \$10, with board. Tailors and shoemakers receive from \$6 to \$12 per week; and printers, bakers, and barbers about the same.

Living is in some respects cheap, but as regards imported articles it is exceedingly dear. I paid a dollar a pound for canned meats; and a camp bed, which I carry with me, worth perhaps \$3 at home, cost me in Guayaquil \$8 of our money. Chairs, which could be bought for fifty cents at home, cost here \$3. They come in pieces, and are put together by the furniture dealers.

CHAPTER VII

AMONG THE MOUNTAINS OF THE EQUATOR

THE HIGHLANDS OF THE NORTHERN ANDES—CHIMBORAZO AND COTOPAXI—
PECULIAR FEATURES OF QUITO, THE HIGHEST CAPITAL CITY IN THE WORLD
—CIVILIZATION IN ECUADOR—THE DIFFERENT CLASSES OF THE PEOPLE
—HOW THE WHITES RULE—THE ABORIGINES—SAVAGE INDIANS WHO
BAKE THE HEADS OF THEIR ENEMIES.

LTHOUGH Ecuador straddles the equator, the greater part of it has an excellent climate. It is a land of the sky, for it has a dozen towns which are twice as high up in the air as Denver. Nine-tenths of its inhabitants live in the clouds. It has cattle ranches in the Andes which are more than two miles above the Pacific ocean; and it has in Quito the highest capital city in the world.

Quito is situated in a valley between the two ranges of the Andes, on the very roof of South America. It is more than half a mile higher than the city of Mexico, and more than a thousand feet higher than the Hospice of St. Bernard, in the Alps, the highest point in Europe where men live all the year round.

Quito claims a population of 80,000 people. It is doubtful whether it has 50,000. It is not half so large as it was before the country was discovered by the Spaniards. At that time it was one of the great centres of the Inca civilization, a civilization which was better than that of many of the Ecuadorians of to-day. The city then had several hundred thousand inhabitants, and it was for many years more populous than it is now.

Quito is thus one of the old cities of the world. The Indians have many traditions concerning it. They claim that there was a town upon its site before Christ was born; and it is known that there was a settlement there in A. D. 1000. At the time of the Incas it was a city of temples and palaces. Atahualpa, the Inca monarch, who was murdered by Pizarro, had a home in it, the roof of which was plated with gold; and the city contained

vast treasures, which were buried by the Indians in order that they might not fall into the hands of the Spaniards.

The Quito of to-day is like a Spanish city of the Middle Ages. The people of Guayaquil say that it is just about a hundred years behind the moon. It has nothing in the way of modern improvements, and few modern customs, and it is so difficult of access that travellers seldom get to it.

The only means of crossing the Andes is on mules. You go first to Babahoyo, and from there make your way over the mountains, a distance of 165 miles, to Quito. The round trip costs about \$100, and if you have baggage considerably more. All goods taken to and from the central valley of Ecuador are carried up the mountains on the backs of men and mules. At Babahoyo I saw twenty-four Indians starting out for Quito with a piano. The piano was cased, and the men were bearing it along on their heads. The cost of transportation was almost as great as the price of the piano. Ordinary packages cost from \$60 to \$70 per ton; the freight on a small boiler recently shipped was \$100. Absolutely nothing has been done in the way of making roads, and you travel along narrow paths, fording streams, your mule at times wading through mud up to its belly. Parts of the road are so steep that you have to lean over and clasp the neck of the animal you are riding to hold on, and in descending some of the declivities the mules sit down and slide.

The Ecuadorians say, "Our roads are for birds, not for men." You realize this again and again during the journey, which in the wet season is uncomfortable from start to finish. There is almost constant rain; and you cannot rest in the wretched inns, they are so infested with unmentionable insects.

It grows colder as you ascend, and at the top you need your heaviest clothing. Crossing the coast range you enter a wide valley more than two miles above the sea, finally reaching the little town of Ambato, about seventy miles from Quito. Here you get a stage, which takes you to the capital. The stage-coach is of English make, but antiquated. It is pulled by relays of mules, which carry you on the gallop.

Another route from Guayaquil to the capital is over Ecuador's only railroad to the foot of the mountains at Chimbo. The road is a narrow gauge, fifty-four miles long, built by an American named Kelley. The original idea was to carry it over the

Andes, and this may be done at some time in the future, a concession to that effect having been granted to an American syndicate.

Quito is beautifully situated, right in the mountains, walled in, as it were, by some of the highest peaks of the Andes. Just back of it is the active volcano, Pichincha, its snow-capped peak so near the city that the ice for making Quito's ice-cream comes from there. Pichincha has a crater half a mile deep and a mile wide at the bottom. It is a mile higher up in the air than Mt. *Ætna*; and its eruptions, which occur at long intervals, are such that Mount Vesuvius would be a portable furnace beside it.

It is a five hours' journey from the city to the top of this volcanic mountain. You can ride almost to the summit on horseback. Standing upon it you look down upon Quito in the valley below. It is a city of white adobe houses of one and two stories, roofed with red tiles. The buildings are low and squatty; they stand along narrow streets which cross each other at right angles. One is struck by the large numbers of convents, monasteries, and churches among them. Fully one-fourth of the city is taken up by church establishments, and there are as many priests and nuns to the square foot as in Rome. Quito is altogether Catholic. It has always been a supporter of the Pope, its contributions to the Church having been so numerous that it has received the name of "The Little Mother of the Pope."

The government is still largely a union of church and state, and the priests have great influence. Catholicism is the only religion, and by that I do not mean the liberal Catholicism of the United States, but Spanish Catholicism, which in Ecuador has as many evils as it had in the days of the Inquisition. The country is nominally a republic, but voters must belong to the Church, and must be able to read and write. Inasmuch as not more than one-tenth of the people can read or write, the educated whites control the elections.

Ecuador is a land of revolutions. Every now and then a new party ousts the President and takes possession, going through the ceremony of an election afterwards as a matter of form. The President lives at Quito, and in his Cabinet of five ministers, one represents the Church. In addition to the President and Cabinet, there is a Congress of two Houses, a system of courts, and a number of governors, one for each province, who are appointed and subject to removal by the President.

Ecuador has a small national debt, payment of the interest on which has been suspended since March, 1896. There are but few direct taxes. Seventy per cent of the government income is derived from customs duties; fifteen per cent from taxes on cacao, real estate, rum, and tobacco; and six per cent from salt and gunpowder monopolies. Every city has its government salt warehouse, where the merchants or private consumers must come to buy, and where they pay several times as much for a very poor article as they would if salt were free. I visited such a warehouse at Babahoyo. There were hundreds of tons of dirty salt, banked up in large barn-like rooms, and I saw salt weighed out to purchasers on a pair of American scales. The salt costs the government sixty cents a hundredweight, and its price at the warehouses is almost two cents a pound. The revenue from this source amounts to about \$200,000 dollars a year.

Ecuador has now a public school system, but, as I have said, only about one-tenth of the people can read and write. There are over a thousand primary schools, and more than forty schools of higher grades. The children all study out loud, and the din is as great as in the schools of China. Quito has a university, which is largely managed by Jesuits, and there are colleges at Cuenca and Guayaquil. At Guayaquil there are two newspapers, both of which get brief cable dispatches. The papers are sold by newsboys on the streets; they are printed on old American presses, from type made in the United States; but their paper and ink come from Germany. Among the other public institutions are a hospital at Guayaquil, and asylums for lunatics and lepers at Quito.

The most interesting people of Ecuador are the Indians, who are of two classes, the semi-civilized and the savage. Among the latter there are about 150,000 or 200,000 who have never been subdued, and are less known than the people of interior Africa. Some of the tribes along the Napo river, which flows through eastern Ecuador into the Marañon, use poisoned arrows, which they shoot at their enemies through blow-guns made of reeds. With these guns they can send the arrows long distances, and a scratch from one of them causes death.

Another tribe of this region, the Jivaros, have a curious method of preserving the heads of such of their enemies as are killed in battle. While I write these words a human head, cut



INDIANS WHO CURE AND TRADE IN HUMAN HEADS

off just below the chin, lies on the table before me. Whether it is that of a woman or a man I do not know. The hair is long, black, and silky, and so thick that I can hardly grasp it all in my hand. The head came from this Indian tribe. It was offered to me as a curiosity for \$100 in gold, and I can buy several more at the same price. It is a gruesome object, not larger than my fist, but the features are as perfect as in life. All the bones have been removed, and the skin has shrunk into its present shape. It is black, its eyes are closed, the forehead over which the dark hair hangs is low, and the nose is almost negro in shape. The lips, which were once full and sensuous, are sewed together with long cotton strands, which hang down like a macrame fringe; and the chin has a pronounced dimple in it, which may have been admired by the sweetheart and friends of the owner of the head.

It is now against the laws of Ecuador to sell these heads, but they are surreptitiously offered to every traveller. How they are prepared is a mystery. A red-whiskered German came to Quito some years ago to learn the process. He made his way into the wilds of the eastern Andes and disappeared. Nothing has since been heard of him, but it is said that about six months after he started out on his expedition a head beautifully cured was brought in for sale. Its features were German in cast, and on the chin was a beard of the same brick-dust hue as that of the German explorer.

From native sources I learn that the Indians, after they have removed the bones of the skull, cure the heads by filling them with hot pebbles and passing them from hand to hand, pressing them so carefully inward that in shrinking they do not lose their shape. After this they are baked in the sand and so treated that they will last for ages. The skin of the neck of the head before me is about one-sixth of an inch thick. Its pretty ears are about the size of a silver quarter, and as I push back its hair and look at its closed eyes I almost fear that they will open and glare at me.

Most of the Indians of Ecuador are semi-civilized. We have, it is estimated, about 260,000 Indians in the United States. Ecuador has 870,000 in a total population of 1,250,000, the remainder of the inhabitants being made up of about 100,000 whites and

about 300,000 of mixed races, or crosses of the whites and negroes with the Indians.

The whites are the ruling class. They are the government—the wealth, the brains—the Ecuador that we know in business and in trade. The Indians who constitute the working population are chiefly Quichuas, the descendants of the people who inhabited the plateau when the Spaniards first came. They are thriftless, and seem to have little spirit or ambition. Their highest idea of pleasure is plenty of liquor; and the Ecuadorian “smile” is as common as the drink of America. They live like dogs, and work almost from birth to death. They till the soil, carry the freight on their backs up and down the mountains, and are in fact often treated more like cattle than the animals themselves. They submit to the whites, and are accustomed to being advised by them. Only a comparatively few of these Indians can read or write, and very few accumulate property. The semi-civilized Indians are Catholics. They are ruled by the priests, and a large part of their earnings goes to the Church.

From this it will be seen that the people of Ecuador will never be a large consuming class. A suit or two of cotton clothes, a little rice and meat, a cane hut in the lowlands or one of adobe brick in the mountains, will suffice for most of them. It will be long before Ecuador can have a large trade. There are no accurate trade statistics, and it is consequently difficult to get at what the business of the country amounts to. It probably ranges somewhere between \$10,000,000 and \$15,000,000 a year, the imports being less than the exports. There are practically no factories, hence all its manufactured goods are imported. Except lumber, lard, kerosene, flour, and barbed wire for fences, which are largely shipped from the United States, most of the imports come from Europe.

Freight rates are at present lower to France or England than to New York, and the banking connections are altogether in favor of London. Many American articles might be introduced into the country if our people would study the markets, accommodate their prices to European competition, and so pack their goods that they could be shipped upon the backs of mules to the high plateau across the mountains.

CHAPTER VIII

ON THE GREAT SOUTH AMERICAN DESERT

A LAND OF DRY SAND, WHERE IT RAINS ONLY ONCE IN SEVEN YEARS—SKELETONS AND MUMMIES—TRAVELLING SAND-DUNES, WHICH ARE ALWAYS ON THE MARCH—AMONG THE RUINS OF THE INCAS—THE OLD CITY OF JEQUETEPEC—CAJAMARCA, AND ATAHUALPA'S PRISON CELL WHICH HE FILLED WITH GOLD—THE SUNSETS OF THE DESERT.



LEFT Ecuador, sailing in a Chilean steamer down the Guayas river into the Pacific, and am now at Pacasmayo, Peru. I am in the heart of the great South American desert, that wonderful strip of sand which extends from the borders of Ecuador for two thousand miles southward, along the Pacific coasts of Peru and Chile. It is as long as the distance from New York to Salt Lake City, and is in no place more than eighty miles wide.

I have seen something of other great deserts of the world. From the top of the pyramids I have looked over the sands of Egypt; I have sailed through the Indian Ocean and the Red Sea along the deserts of Arabia, and on the Mount of Olives have cast my eyes over the bleak wastes between Jerusalem and the Jordan; I have travelled through the rocky highlands of our arid West, and have had my eyes dazzled by the alkali deserts of Mexico; but so far I have seen nothing like this South American desert.

The origin of the Peruvian desert may be explained by stating that the atmosphere forms the clothing of the earth, and that old Mother Earth works well only when her clothes are periodically wet. The mountains are great clothes-wringers, which squeeze the rain out of the air, and by the difference in temperature cause it to fall on the land. If we except the Himalayas, the Andes kiss the sky at higher points than do any other mountains on the globe. The chief winds which sweep over South America come from the east. I am now as near the

equator as I was a few weeks ago, when I waded through tropical mud amidst the dense vegetation of the Isthmus of Panama. The sun is continually drawing up vapor from the sea, but the winds are carrying it northward and westward, and the only breezes we have are the cool dry winds which come down upon us from the Andes. These winds originally started out from the west coast of Africa. As they swept over the Atlantic they pumped themselves full of water, and when they reached the coast of Brazil they were well-loaded. As they crossed the continent, they dropped their moisture, feeding the great rivers of lower South America, and covering the land with tropical verdure. They dropped more and more as they climbed up the eastern slopes of the Andes, until they reached the top, where they left the last water there in the form of snow, so there was nothing left to make fertile the western slope.

The result is that all the water that comes down to the west coast is from the melting of the snows. This is enough to form a river here and there through the desert; and it is in the valleys of such rivers that one finds the habitable parts of the coast regions of Peru and northern Chile. There is another habitable region farther up in the mountains, between the two ranges of the Andes which run almost parallel in this part of South America; and there is a wild strip on the eastern slope, which, through the agency of railroads, will some time be one of the most productive parts of the globe.

One of the wonders of the desert is its travelling sand-hills. Just back of the shore there are great mounds, containing hundreds of tons of fine gray sand, which is always moving under the influence of the winds. The mounds are of crescent shape, and their little grains, not so large as a mustard seed, are ever rolling up, up, and over the top of the crescent, going always toward the north. They climb over hills, they make their way through valleys, as uneasy but as steady in their march as the Wandering Jew.

Here, at Pacasmayo, there is a railroad which crosses the desert on its way up the Jequetepec valley. When it was built the engineers thought nothing of the sand-hills, which were then far to the southward. The sands, however, are no respecters of railroads. They moved onward, and swallowed up the track, so that it had to be taken up and relaid on the other side of them.

In a ride on a hand-car up the valley I saw one place where a mound of sand containing some thousand of tons was encroaching upon the track. A stream of water from the river had been let in through a ditch at the side in a vain attempt to carry it away, and the men were at work shovelling the sand from the rails. As I passed I saw the sand coming down in a stream like thick molasses, and it seemed to me that it would be almost impossible to conquer it.

I took photographs of some of the moving hills. I climbed to the top of one of them fearing that I might sink down to my neck in it, but discovered that the sand was so compact that even my shoes were not covered. Some of the sand-hills are stopped on their course by the *algoroba* bushes, which grow here and there in the desert. The sand gathers about the bushes, almost covering them, and forming hills topped with patches of green.

The chief animals used to carry freight in the desert are donkeys, mules, and horses; the last named are sometimes used for riding. The only roads are bridle-paths, which are often covered up by the sands. This makes travelling in the desert very dangerous. No stranger does well to attempt to cross it alone. He must have a guide, who will direct his course by the stars at night and by the wind during the day. I can imagine no place where it would be so terrible to lose one's bearings. You might wander about for days without finding anything to eat or drink. You would pass by the skeletons of animals which had been lost and died there, and, perhaps, see the bodies of some at which the buzzards were still picking. I passed the bones of men, donkeys, and cattle, and at one point stopped to rest on a pile of skeletons which had been dug from an Inca ruin and left there to bleach.

It is an odd thing that there are no bad smells on the desert. Flesh does not decay, for the air is so dry that it sucks the juices out of everything left upon the sand. In the northern part of Peru is the valley of the Piura river. Not long since a traveller, going through this valley, saw in the cemetery an open coffin, and in it the body of a dead priest clothed in a purple shirt and white cotton drawers. The tropical sun was beating down upon the corpse, and the traveller, who was a devout Catholic, proposed to bury it, expressing great indignation that one of the fathers should be so treated. The priest of the town, however, refused

to permit it, saying: "My dear sir, you do not understand. That is the body of my friend, which I have put out there to dry, so that I may send him in good condition to his family in Guayaquil."

It is owing to this dryness of the air that the mummies of Peru are found in good preservation. There are plenty of them in the desert, and, in excavating the ruined cities which were in existence when the Spaniards came, some of them are dug up every now and then. The mummies are usually found in a sitting posture, wrapped in cloth and tied up with strings.

All about Pacasmayo I noticed vestiges of the Incas. They are to be found throughout the coast region of Peru, as well as on the highlands. Among the most remarkable near here are the ruins of the old city of Jequetepec, which I visited. I doubt whether the reader has ever heard of them. Still, they are the remains of what was once a populous city. They are situated high above and far back from the irrigated lands along the Jequetepec river. Near them are the remains of Inca fortifications, great mounds of sun-dried bricks, about 200 feet high.

These ruins are in the heart of the desert. They cover several hundred acres; and the walls, in many places higher than one's head, still stand, while within them the outlines of the houses can be plainly seen. In the centre of the city is a large mound, probably the site of an Inca palace or of a temple devoted to the vestal virgins of the sun. I rode my horse up to the top of this mound, and in my mind's eye could easily re-people the ruined streets below me. All about were bits of pottery, the broken dishes of that great people of the past. Here were the outlines of a square, and there the remains of a large house, which may have been the residence of one of the rich nobility from whom the Spaniards stole their gold.

In my travels over the desert I saw the ruins of many other towns. In that acme of civilization, which makes every rood of earth maintain its man, the Indians were far superior to the Spaniards. When Pizarro came, the Inca king had, it is estimated, about 40,000,000 subjects. Peru was far more thickly populated then than now, and it undoubtedly had a higher state of civilization. Most of the people then lived on the high plateau between the two ranges of the Andes, but they irrigated vast regions of the coast desert; and even the mountain slopes were turned into farms. They had large cities and magnificent roads.

Not far back from the coast across the Andes is the town of Cajamarca, where, more than three and a half centuries ago, the Inca king, Atahualpa, received the Spanish freebooter Pizarro, and was treacherously captured by him. When Pizarro entered the country, with a handful of soldiers and a few horses, he was kindly treated by the Indians. Atahualpa heard of his coming, and met him at Cajamarca. Pizarro asked him to dine with him, and when Atahualpa came unarmed into the palace which Pizarro by his favor was occupying, Pizarro closed the doors and captured him, while the Spanish soldiers slaughtered his attendants. The person of the Inca king was so sacred that the event paralyzed the nation, and at Atahualpa's request war was not made. Then Atahualpa said that if Pizarro would release him he would fill the room in the palace in which he was confined with gold to a point as high as he could reach. This was agreed to, and for several weeks gold was brought in great loads from all parts of Peru. The room was seventeen feet long by twenty feet wide, and the point up to which it was to be filled was designated by a red mark nine feet above the floor. The gold was in all sorts of shapes. Some of it was in gold plates torn from the Temple of the Sun at Cuzco. There was a variety of golden basins, drinking-cups, and dishes. There were vases of all kinds, and many pieces of beautifully carved workmanship. When the room was almost filled up to the mark indicated, Pizarro ordered the Indian goldsmiths to melt the whole into ingots, and there was so much gold that they worked at it day and night for a month. Then Pizarro refused to let Atahualpa go, and after a mock trial put him to death. There is a stone in Cajamarca which the Indians say is stained with Atahualpa's blood.

Notwithstanding that this part of the Pacific coast has had no rain for a long time, the people are expecting it this year. The reason for this expectation is that it rains almost regularly every seven years in some parts of the desert. The last big shower was in 1891; there was a shower seven years before that; and I am told that about every seven, eight, or nine years there is a period, of a week or more, during which the rain falls in bucketfuls. As the water touches the earth, vegetation springs up. After a day and a night the desert becomes green. Soon great fields of grass spring up, and flowers by myriads appear in blossom. There are plants which we in the North have only

in hot-houses, and flowers more brilliant than any we know of. This vegetation oftens lasts but a few days. It has, however, been known to flourish for a month; and at its height the cattle are driven from the irrigated valleys to the desert to feed. Seeds of all sorts of plants, trees, and shrubs, seem to keep perfectly in the hot, dry sand, and to be ready to leap into life when touched with moisture. I doubt, indeed, if a more fertile soil than that of the desert of Peru exists anywhere. It seems to be as fat as the valley of the Nile, and where it can be irrigated it usually produces two crops a year. In the irrigated valleys planting goes on all the year round, and I saw corn being dropped in fields adjoining those in which it was almost ripe enough for husking.

I have never been in a land that has so many fruits. We had nine different kinds at our last dinner, all of which were raised here. There are oranges, bananas, limes, and lemons, growing almost side by side with peaches, apples, and pears. There are grapes as luscious as those of California; cherries, plums, dates, and figs. There are watermelons and musk melons, guavas and mangoes. We have the alligator pear, which has a flesh that looks and tastes not unlike fresh butter, and is eaten with salt. Then there are the palta, the tumbo, and the papaya, and in some places cocoanut and other species of palm trees. In every little town and at every railroad station are women peddling fruit, and at such prices that for a few cents one can buy all one can eat. The coffee I drink is made from berries which come from a plantation near by, and the sugar with which it is sweetened is ground out on a sugar plantation not ten miles away.

But I despair of giving a picture of these little irrigated valleys of Peru. Nature has here painted things in a way different from that which she has employed in any other part of the world. Now you imagine yourself in Egypt; at the next step you think of the highlands of Mexico; and again of southern California or of the Pacific coast of Asia. Even the sky is different. Every evening the sun sets in the waters in a blaze of colour such as I have never seen elsewhere. The tints are more gorgeous than those of the Indian Ocean, more soft and beautiful than the skies of Greece. Such colours have never been put upon canvas, and such scenic effects are unknown in our part

of the world. The sun at its setting looks twice as large in the clear air as at home, and as it sinks down toward the sea the waters seem to pull it to their surface so that it assumes the form of a balloon, the lower end of which is slowly submerged. A moment later the top spreads out, and you have a great golden dome resting on the dark blue horizon. It sinks lower, and the waters then turn to gold and silver, and the most delicate tints of purple and red, which match the soft, bright colours of the sky. Last night, just before the sun went down, we had double rainbows in the Andes, although there was no sign of rain on the coast. The air is clear, and although it is now mid-summer, the heat is not oppressive, for we have a steady breeze every afternoon.




A FIELD OF SUGAR CANE

CHAPTER IX

THE IRRIGATED VALLEYS OF PERU

A LAND WHERE COTTON GROWS ON TREES AND IS RED IN COLOUR—THE BIG SUGAR PLANTATIONS, AND HOW THEY ARE MANAGED—PERUVIAN LABOUR AND WAGES—A LOOK AT THE PEONS AND THEIR HOMES.

LTHOUGH most of the people of Peru live on the high tableland beyond the coast range of the Andes, the country, as we know it, is chiefly confined to the coast. It is made up almost wholly of little irrigated valleys, fed by the snow-water rivers on their way from the mountains through the desert to the sea. At the mouths of such rivers are the chief ports, and in the interior are numerous villages and towns. Lima, the capital, lies in the valley of the Rimac river. Paita, at the north, is the port for the valley of the Piura river, while Pacasmayo, where I am now writing, is at the mouth of the Jequetepec.

At the different ports of northern Peru our steamer took on thousands of bags of rice, boxes of tobacco, and quantities of skins and hides. At Paita we received a number of bales of red cotton, which came from the Piura valley, the chief cotton-raising section of Peru. Indeed, the irrigated lands of the desert seem to be the natural home of the cotton plant, which grows wild here, and often reaches the size of a small tree. Some of these trees, from fifteen to twenty feet high, have produced cotton from ten to twenty years. There is in Pacasmayo an hotel in the back-yard of which is a cotton tree from which, so the landlord says, comes enough cotton annually to pay for all the eggs consumed in the hotel.

The native Peruvian cotton is not white, like ours. It is of different shades of brown, some being almost red in colour. The finest quality is raised in the Piura valley, the best yields coming after the seventh year's rain. At such times the rivers flood the

country, bringing down rich slime from the mountains, and when the rains have ceased everyone starts to plant cotton. The demand for labour is such that many people go there for work, the wages paid being from twenty-five to thirty cents for a day of ten hours.

Raising cotton in Peru may be called the luxury of agriculture. The soil is so rich that the plants do not need manure or tillage. The ground is not ploughed; holes for the cotton-seeds are simply dug with a spade, and the seeds are covered up. They soon sprout, and from one planting the farmers are sure of three good crops within the next year or so, the first crop maturing in nine months. After these three crops, there are irregular crops from the same plant or tree for a number of years. All that is necessary is to keep them trimmed, and to pick the cotton. In the lands along the river, which can be irrigated, the crops are regular, and from two to three crops a year are common. The cotton ripens, in fact, throughout most of the year, and you see buds, blossoms, and cotton-wool on the same tree at the same time. In the irrigated lands the yield is from 300 to 400 pounds to the acre. It is estimated that the growing and baling cost about a dollar in gold (4 shillings sterling) per bale.

Peruvian cotton is very valuable. It brings thirteen cents a pound at present, and has brought as high as twenty-three cents. It is especially valuable because it can be used as wool. Its fibre is so much more like that of wool than cotton, that when ginned it would easily pass for wool. It is used by the manufacturers of hats, hosiery, and underwear, to mix with wool, giving the articles into which it goes a finer lustre and a better finish, and rendering them less liable to shrink. The fibre is longer than that of any other cotton except the Sea Island and the Egyptian; but the area in which it will grow is comparatively small.

The country scenes of Peru are unlike those of any other part of the world. Let us look at some of them, as we ride through the valley of the Jequetepec to the foothills of the Andes. We go on a railroad built by an American a few decades ago, but now owned by an English syndicate, the Peruvian corporation. The cars came from the Eastern States, the ties from Oregon. The telegraph poles are discarded rails, to which supports have been bolted to bear the wires; iron is used

on account of the ants. Our conductor is a little Peruvian in a linen suit, and we have another official on board in the travelling postmaster, who sells stamps, takes up the letters from the various small villages and estates as we stop, and hands out mail to the people who come to the train.

Notice the little farms we are passing. The fields are fenced in with thick walls of mud as high as your waist, and irrigating ditches carry sparkling water here and there through them. The water comes from the river, but the irrigating is carelessly done, and much water goes to waste. There is a rice field, rice being one of the best-paying crops in this part of Peru; and there are mills at Pacasmayo where the rice is hulled, polished, and prepared for shipment.

We go through large sugar plantations. These are owned by foreigners, and many of them are managed on a magnificent scale. We pass one factory which makes 5,000 tons of sugar annually. The buildings on it have cost over \$1,000,000; its machinery was imported from Philadelphia. We see steam ploughs, harrows, and cultivators at work in the fields, and notice that the cane is hauled to the factories by steam-engines, over a portable railroad. More than 100,000 tons of sugar are now annually produced in Peru. There are, moreover, more than sixty factories scattered through the irrigated valleys of the coast desert, and upwards of \$20,000,000 is employed in the business.

The labour comes from the native Peruvian Indian, who receives from twenty-five to forty cents a day for his work. He is given a house on his master's plantation, and is furnished with a pound of meat and two pounds of rice as his daily rations. He is also allowed to run up bills at the plantation stores, and his habits and temperament are such that he is always in debt.

I wish I could show our American farm-hands how the Peruvian workmen are housed. I visited one of their homes to-day, a sample of thousands all over Peru. It was merely a hut made of canes so put together that you could see out of the cracks on all sides. The floor was mother earth, the roof was of reeds, being needed only to keep out the sun. The house had but one room about eighteen feet square. A wooden platform about as high as one's knees in one corner of the room furnished a sleeping-place for the heads of the family, while the children slept on the floor. In another corner was the family cook-stove — two stones

just wide enough apart to allow an earthen cooking-pot to rest upon them. There was no window, no chimney, and, except a soap box, no furniture. In the house a family of six were living, and I doubt not they deemed themselves happy. Their chickens and goats lived with them; and all they wanted was enough to eat and drink, and a chance to get drunk now and then. Like all of their kind, they have no ambition whatever, and are perfectly satisfied with their lot.

I asked some questions as to food and hours of work. On rising they take a glass of pisco, or native whiskey, and go to work without breakfast. This is at five o'clock in the morning. The whiskey serves them until eleven A. M., when they knock off for lunch, or breakfast. This usually consists of a stew of goat's meat and rice. At one o'clock they go back to work, and at five they stop for the day. When they get home they have another stew of meat and rice, and perhaps a piece or more of bread. After dinner they sit about and talk, and at eight or nine o'clock lie down in the clothes which they have worn all day, and go to sleep.


The working classes of Peru have no education, and not one in a hundred of them can read. Their clothes cost them almost nothing. The men wear a pair of cotton trousers, a cotton shirt, a pair of leather sandals, and a straw hat. The women wear cotton dresses and straw hats, with black woollen shawls for Sundays and feast days. The men have also ponchos—the blankets and overcoats of South America. These are merely blankets with a short slit in the middle large enough to slip the head through. They are worn by the better classes as well as by the poor, and are costly or otherwise according to the purse of the owner.

The fine farm machinery of which I have written is to be found only on the large estates. The native Peruvians do their work in the rudest way. They use ploughs of wood, tipped with iron, with oxen as the motive power. The Indian holds the plough with one hand and drives with a goad, as the Palestine farmers did in the days of Abraham.

CHAPTER X

AN HOUR WITH THE PRESIDENT OF PERU

THE ROMANTIC CAREER OF A SOUTH AMERICAN STATESMAN—HOW HE FOUGHT HIS WAY THROUGH REVOLUTION TO POWER—HIS NARROW ESCAPE IN A WOMAN'S CLOTHES—THE RESOURCES OF PERU—ONE OF THE RICHEST COUNTRIES IN THE WORLD, WITH THE POOREST INHABITANTS—PERU'S WAR WITH CHILE, AND HOW HER TREASURE WAS STOLEN.

 WAS in company with the secretary of the American legation that I called upon Nicolas de Pierola, the President of Peru. His Excellency had appointed two P. M. for my audience, and at that hour we entered the long one-story building which forms the White House and the government offices of the Republic. Soldiers in uniforms of white duck, with rifles at their sides, were at the door, and as we passed in we went by a company of infantry ready for immediate action in case of revolution. Additional rifles stood in racks against the walls, and we seemed to be in a fortress rather than in the capitol building of a country supposed to be ruled by the people.

Peru is a land of revolutions. Its present executive is a revolutionist, who gained his position after months of hard fighting. In the houses and churches of Lima you may still see the holes where the cannon-balls of his soldiers went crashing through. He besieged the city, and for days his army fought with that of the former President in the heart of Lima. They had Gatling guns trained upon one another, and swept the streets with them. The dead were carried out each morning by the cartload, and there were so many dead horses that they could not be buried, but were sprinkled with coal-oil and burned. The end of the revolution was the deposition of the old president Caceres, and the election of the present executive.

President Pierola's career is a typical one. It illustrates the ups and downs of South American politics, and shows us how

republics are managed below the Caribbean Sea. Nicolas de Pierola is the son of a Peruvian scientist, his father having been a co-worker with Alexander von Humboldt, Sir Humphry Davy, and Von Tschudi, the noted Austrian philosopher and traveller. Pierola was born in southern Peru. He was educated in Paris, where he married the granddaughter of Iturbide, the unfortunate Emperor of Mexico. On returning to Peru at the close of his school days, he began his life work in Lima as an editor supporting the President. A revolution overturned the administra-



THE "WHITE HOUSE," LIMA, PERU

tion, and Pierola was banished. This revolution was succeeded by another, with one of Pierola's friends at its head, and the young man was brought back to the capital and made Secretary of the Treasury. He had hardly received his seal before the President who had been last driven out appeared before Lima with another army, and again Pierola and the executive whom he had been supporting had to leave. Then the war with Chile came on, and Pierola was called back to be one of the generals of the Peruvian army. His soldiers were defeated, but, the

President having fled the country, he became dictator. After a short time, however, the Chileans conquered, and deposed Pierola. He was ordered to leave the country, and fled to France.

Later on, Caceres, who had been elected President, became very unpopular, and Pierola returned to raise a revolution against him. Caceres accused him of treason; he concealed some guns on Pierola's estate, and based his charge upon their discovery by the soldiers sent to find them. Pierola was arrested, brought to Lima, and confined in the palace. One day a French lady



NICOLAS DE PIEROLA, PRESIDENT OF PERU

called to see him. She was admitted, and the two were left alone for a time in Pierola's cell. During this time they changed clothes, and an hour or so after it was supposed the lady had departed, the guards found that Pierola had passed out instead, and that all that was left of him were his brown whiskers, which he had shaved off in order to perfect his disguise.

Pierola fled to the mountains, raised an army, and declared war. He skirmished about the country for some time, and then attacked Lima. After three days' fighting President Caceras was

forced out of office, and a provisional governor was appointed until an election could be held. At the election Pierola was chosen President by an overwhelming majority.

Thus trained in revolutions, the President is too good a soldier to sleep upon his arms. He does not go about without guards, and during our visit to his residence we found soldiers everywhere present. As we went on through the palace, going through one room after another, we passed many officers in uniform, until we met the President's private secretary, who told us that the palace, the President, and himself were at my disposal, and that His Excellency would receive me at once.

He then went out, and a moment later he ushered us into a large hall furnished not unlike one of the reception-rooms in the State Department at Washington. In the centre of the room stood a straight, handsome man with a military bearing. It was Nicolas de Pierola, President of Peru. He stepped towards us as we came in and shook hands with me on my presentation. After we were seated he told me that he was glad to have an American journalist come to Peru, saying he felt that his country was not properly known in North America. He then went on to give me a description of the mineral and agricultural possibilities of Peru, describing its resources and the enterprises which are under way to develop them. He said he was anxious to see an increased trade between Peru and the United States, and that he hoped one of the Trans-Isthmian canals would be pushed to its completion as a means to that end. He said he was in thorough accord with the Monroe Doctrine, and that he believed the republics of this hemisphere should aid and defend one another in protecting their rights as free governments.

The resources of Peru are much greater than is generally supposed. Peru is about one-eighth the size of the United States; it would almost make nine states of the size of New York; and in it are vast areas of good land. In addition to the coast desert, with its numerous irrigated valleys, there are extensive pastures in the highlands; and over the mountains on the eastern slopes are valleys which will produce as fine coffee as any in the market. The Peruvian corporation, an English syndicate, has a grant of 5,000,000 acres of coffee land in this region, and other companies are setting out coffee trees. Parts of Peru are well adapted to the raising of the cacao, such, for instance, as the province of

Cuzco, in which there are nine estates, having altogether 27,000,000 cacao trees, or an average of 300,000 each. The mines of Peru will be treated of further on. They include both gold and silver mines, some of them being exceedingly rich. In northern Peru, along the coast, are petroleum fields now being worked; and railroads have been projected to tap valuable anthracite coal deposits which lie across the coast range of the Andes.

From this description it might be thought that the Peruvians were one of the richest peoples of South America, whereas they are among the poorest. The small class of aristocrats, who were so wealthy before the war with Chile, are now comparatively poor; and the vast majority of the people were never anything else. Peru has about 3,000,000 people, not more than Greater New York. Of these 57 per cent are pure Indians, about 23 per cent are of the mixed race, and the remainder are whites. Not one Peruvian in five is pure white, yet the whites have most of the land, and the others work for them. Three centuries ago the Spaniards subjugated the Indians and made them slaves. They worked them in the mines, and from their labour Spain became rich. The Spaniards carried away tons of gold and silver, taking from one Inca temple alone 42,000 pounds of gold and 82,000 pounds of silver. When the gold mines were partially exhausted, they tapped the silver mines of Cerro de Pasco and other places, out of which came so much wealth that one of the viceroys was able to ride through Lima from the palace to the cathedral over a path paved with ingots of silver. The horse upon which he sat was shod with gold, and, if tradition is to be believed, every hair of its mane and tail was strung with pearls.

Later on the wealth of the guano islands was added to that of the mines, and Peru received hundreds of millions of dollars from her manure piles. Then the nitrate deposits were discovered, and other millions came. The bulk of all this money went to a few of the governing class and their friends, and the phrase, "as rich as a Peruvian," was current in South America.

Such was the situation when the Chileans turned their covetous eyes to the north. They were poor, but brave and strong, and nationally without a conscience. They trumped up a boundary line as an excuse for war, and invaded Peru. They had an army of 25,000 men, with which they overran the country, laying it everywhere waste or demanding ransom for refraining from

doing so. The outrages of this war are unsurpassed in history. At Chimbote a Chilean general demanded that a sugar-planter should pay him \$100,000 within three days. The planter was unable to do so, and the Chilean thereupon destroyed his sugar factories, blowing up the machinery with dynamite. He tore down the houses of the estate, and he killed five hundred sheep which his soldiers could not carry off.

The Chilean army destroyed the magnificent residences of the summer resorts below Lima. They looted Lima, occupying the university as a barracks. They destroyed the archives and sacked the public library, which contained 50,000 volumes and many valuable manuscripts. They even robbed the zoological gardens, sending its elephants and other animals to Santiago. In their battles they gave no quarter, bayoneting not only the wounded soldiers, but the defenceless civilians as well. The war lasted three years, and when it was ended Chile annexed the nitrate territory which she coveted. Since that time Peru has had a series of revolutions. The people have been ground between the upper and nether millstones of personal politics, and until lately have had but little chance to do more than keep out of the way of bullets.

Since the inauguration of President Pierola peace has prevailed and business has been steadily improving. Foreign capital has been coming in, and the President is doing what he can to develop the country.

The President of a South American republic is a very important factor in its prosperity. He has more power in many ways than the President of the United States. He practically decides upon everything, controlling Congress, and having much to say as to concessions for public and private works.

Congress is constituted in the same way as in the United States. It consists of a Senate and a House of Representatives, the Senators being elected for four years, and the Representatives for two. All laws originate with Congress, and all appropriations are supposed to be determined upon by the two Houses. The salaries of the members of Congress are less than with us; they are paid \$7.50 a day, and, as the sessions are limited to ninety days, each receives less than \$700 a year.


After leaving the President I paid a visit to the two Houses of Congress. They are situated on the Plaza of the Inquisition,

the site of the terrible trials and tortures of the past. They look out upon a square where scores of heretics were burned at the stake. The Senate has its chamber in the room where the Court of the Inquisition held its sessions, so that speeches in favour of free thought are made in the very hall where the bigots of the past tortured and slaughtered human beings in the name of religion.

CHAPTER XI

THE CAPITAL OF PERU

A MAGNIFICENT CITY MADE OF MUD AND FISHING-POLES—HOW LIMA HOUSES ARE BUILT—CHICKENS THAT LIVE ON THE ROOFTOPS—THE STORES AND THE GREAT CATHEDRAL—THE PRETTY GIRLS OF LIMA—THEIR ODD CUSTOMS AND COSTUMES—LIMA ON HORSEBACK—WOMEN WHO RIDE ASTRIDE—A CITY WHERE MULES TAKE THE PLACE OF THE HUCKSTER CART.

ET us take a walk together through the quaintest city of this hemisphere. We are in Lima, the capital of Peru. The streets on which we stand were laid out more than three hundred years ago. Lima was a city when Boston was in its swaddling clothes, when Philadelphia was a baby, and all to the west and south of it was an unbroken wilderness. There are houses in Lima which are two hundred years older than Chicago or Cincinnati, and I can even introduce you to one of the oldest citizens, the founder of the town, who, dried and pickled by the pure Peruvian air, has for over three centuries stayed here with his property. I refer to the Spanish freebooter, the robber and butcher of the Indians, Pizarro, who laid out Lima in 1535. He was assassinated on the spot where the President of Peru now lives, and his skeleton and his brains are kept in a glass case in a cathedral across the way. The skin is dried, and it sticks to the bones, but, with the exception of patches here and there which have been cut off for relic-hunters, the hide is intact, though decidedly leathery and the worse for the wear.

In Lima everything lasts long, except money. Where else in the world will you find a city three hundred years old built of mud? Lima has more than 100,000 people; it is about six miles around it, and two miles from one side to the other. It has a network of narrow streets, that cross one another at right angles, with spaces clipped out here and there for parks or plazas.

The houses are of one and two stories, flush with the sidewalks; and in the business sections cage-like balconies hang out from the second stories, so that you are shielded from the sun as you pass along the streets.

Still, Lima looks very substantial; you might easily imagine it to be made of massive stone, here and there wonderfully carved. Some of its walls look like marble; others imitate granite. The houses are of all the colours of the rainbow, and they line the streets with solid walls. About the chief square there are enclosed balconies walled with glass extending out from the second stories, and under these are imitation massive stone pillars, forming an arcade, or cloister, around two sides of the square in front of the stores. These pillars are of mud, the polished walls of the houses are made of sun-dried brick, coated with plaster of paris, and the second stories are a combination of mud and bamboo cane. The whole city is built of mud and fishing-poles. Here some of the finest churches of the continent are made of mud. The great cathedral, which cost millions, is a mud structure, and could you take a sharpened rail and thrust it against one of its massive towers, it would go through it as it would through a birdcage.

But let us go up to the roof of our hotel and take a bird's-eye view of Lima before we begin to explore it. We are in a vast field of flat roofs, above which here and there rise the massive towers of great churches. At the back of us, at the edge of this field, are the bleak foothills of the Andes, gray and forbidding; their tops in a smoky sky, and white clouds rushing here and there over their sides. On the edge of the city we see the green crops of the valley of the Rimac, and we can readily make out the three bridges which cross the river as it flows through Lima.

Look down on the roofs all about us. They are more like garden beds than the coverings of houses. Do not stamp your feet or step heavily as you walk to and fro. The roof trembles beneath us and with little effort we could push our feet through. The supports of many of the roofs are merely cane poles on which dirt is spread. On some matting is first put and then a layer of earth, sand or ashes.

It is supposed rarely to rain here; almost from year's end to year's end Lima has not a shower. Waterproofs are unknown,



LIMA, PERU, SHOWING CATHEDRAL

and the umbrella-mender's cry is unheard. It is on this account that these mud walls stand throughout the generations. It is indeed only through lack of rain that Lima exists. A big shower would reduce the town to a mud heap, while a two-weeks' pour would wipe it out of existence. Even here, however, nature sometimes varies her course. Last year the people were horrified by hearing the raindrops pattering on the roofs. The water which fell would hardly have been called a sprinkle in some parts of the world, but it did more damage than an earthquake.

Much of the light of the Lima houses comes from the roofs. Each house has a court in the centre, around which the rooms run. Many of the larger buildings have several courts. When there is a double row of rooms the inner ones are lighted by little dormer windows, which extend up through the flat roofs, and from where we are standing look like chicken-coops. It is difficult, in fact, to tell the dormers from the real chicken-coops. Thousands of chickens are born, lay their eggs, and grow fat on the roofs. Over there a hen is cackling. I am awakened every night by the crowing of the roosters above me, and even in the heart of the city the noises of the early morning make one imagine one's self in a barnyard. There is one asthmatic old rooster that crows me awake regularly at five A. M., and another that sometimes makes the air shake at midnight. I have not yet seen a cow on the roofs, though I am told that some families have their stalls so located, the cattle not being taken down until they are ready for killing.

From this one might think the houses of Lima would be always tumbling down, and that the city would be in constant danger from fires. This is not the case. The houses are almost earthquake proof, the first-story walls of the larger buildings being often from four to six feet thick, although those of the second story are thin. The mud walls never take fire. The furniture may go up in smoke, but as soon as the roof is ablaze it falls in, and the mud which covers it puts out the fire. There are, indeed, but few losses from fires here; and even out in the country, away from the fire companies, houses like these are insured for one-half of one per cent. Such a thing as a block or square burning down is unknown in Lima.

From the hotel roof we get some idea of how compactly the city is built. There are no gardens, and but few back-yards.

The larger houses cover a great deal of space, as they are confined to one, or at most two, floors. The smaller ones are so small that it is hard to imagine they are houses at all. There are hundreds of little blind alleys, which are reached through doors in the walls along the main streets. The alleys are walled with cell-like rooms, each not more than ten feet square. Each of these rooms is a house. In one alley which I visited I was told that there were on the average about eight people to each tenement. Such houses have yards about six feet square surrounded by high walls. They have no windows, and the light comes in through the front and back doors. None of the houses have chimneys. Most of the cooking is done over charcoal fires. Even the best houses have few windows on the ground floor; as a rule the light comes from the interior courts or the roof. In the two-story houses of the better class, galleries run around the courts, and the rooms opening out into these are large and airy. All outside windows and doors are barred with iron, and the better streets of the city look like long rows of prisons. Many fine homes are entered through iron-barred gates—palatial mansions surrounding courts filled with flowers.

In the business sections the people live in the second stories, which are divided into flats, or apartments. Many rooms are rented, and only the wealthy have large houses. On the ground floors are stores and shops open to the street. The stores have no windows, and the doors run the full width, so that the whole front is pushed back or taken away during business hours. The light is usually from the front, though the larger establishments have courts, and extend a long distance to the rear. Many of the shops are like caves. They are cells separated only by thin walls. Indeed, a walk along the Mercadores is like a journey through a museum or one of our large department stores. The business streets are from twenty to thirty feet wide, more often the former; and the sidewalks are not over four feet in width. Four people cannot well walk abreast, and a party must go along double file. A donkey with panniers took the right of way from me this morning, for I was forced to step out into the road to let him go by.

The street scenes of Lima are interesting. Let us stop under the arcade, which runs about the plaza, and watch the crowds. We are among some of the best shops of the city. They are full



of fine goods, and here between four and five o'clock every afternoon the people come to buy and do business. These hours are the gayest of the day, when the crowd is as dense as that of lower Broadway at noon.

The crowd in the Lima arcades, however, is far different from that on Broadway. No one hurries. The men saunter along or stand on the street and chat with their friends. We see little knots of them every few yards, and the messengers, the merchants, and the clerks seem to have time and to spare. Almost everyone is well dressed. There are tall hats and kid gloves; and nearly everyone, old and young, carries a cane. All are very polite. They bow, smile, shake hands, and lift their hats when they meet; and bow, smile, and tip their hats when about to depart. So far as form goes, they are the pink of perfection, and you would imagine them gentlemen of leisure rolling in wealth. The truth is, most of them are poor. Peru has for years been playing a losing game with fortune, and the day of her enormous riches has long gone by. If you look closely, you will see that many a coat is shiny at the seams, and that the silk hats are fast losing their nap. There are, perhaps, more reduced gentlemen in Lima than in any other city in the world. They have been patronizing the pawnbrokers and the foreign bond-buyers until the people, nationally and individually, are comparatively poor. They are not a business people, and, having fallen, do not know how to get up. The business of the country is in the hands of foreigners; there are not two big Peruvian business houses in the Peruvian capital. The young Peruvians are clerks in the stores or in the government offices, while their fathers, as a rule, are skimping along on the remains of their once great estates.

But we must not forget where we are. We are in the main shopping section of Lima at 4.30 P. M., and some of the prettiest women south of the equator are going to and fro past us. The young ladies of Lima are famous for beauty. They are straight and well-rounded, and their soft oval faces, with their luxuriant hair combed high up from the forehead, are lighted by eyes which seem to shine with the over-soul of their owners.

If you could drop Lima down into New York, the men would think the city had been captured by widows or female orphans who had just gone into mourning. When the women in Lima

go out to walk they dress in black. They do not wear bonnets, but they wrap fine shawls of black goods about their heads, pinning them fast to their shoulders, so that the face alone shows. The background adds to their beauty, and the costume on the whole is becoming. It saves the buying of new hats or bonnets, and is easy to put on and take off. Doubtless many a seedy waist and frowsy head are hidden under those black shawls. The Peruvian woman needs to wash only her face for the streets,



A LIMA BELLE

for the rest of her person is hidden. I was told that she often dispenses even with washing her face, for she thinks that cold water brings fevers, and that frequent bathing is productive of all kinds of disease.

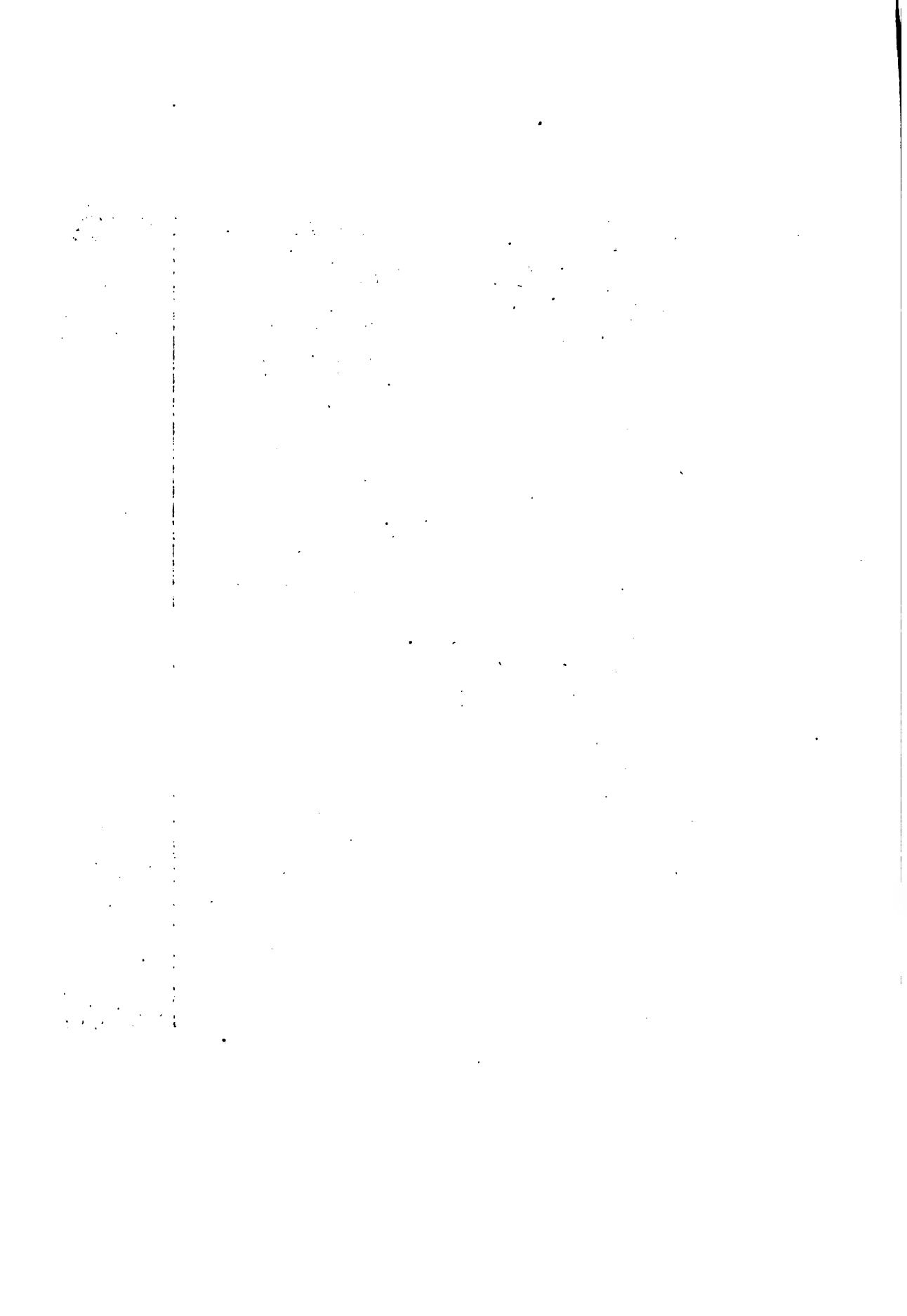
A good deal of face-powder is used, and Lima has as many perfumery shops as any city of its size in the world. Both men and women are fond of sweet smells, and at carnival time they go about with squirt-guns and atomizers, with which they drench their friends of the opposite sex. The girls throw powder on the men, and boys and women dash water into

each other's face. A crowd of Lima belles will sometimes catch hold of one of the beaux and souse him in a bath-tub full of water. Yesterday I came across a young man who was suffering with fever from a cold which he had taken from a recent similar ducking.

The Lima women are very devout. Almost every one we meet carries a prayer-book, and we seldom enter a church without finding a score or more of them on their knees. No woman is allowed



CHURCH OF SAN DOMINGO, LIMA



to enter a church wearing a hat or bonnet; those who attempt to do so are touched with a long stick by the sexton and told to uncover their heads. A church congregation is indeed one of the curious sights of Lima. The people are Catholics, and the ceremonies are impressive, the costumes of the priests being resplendent with gold and silver braid. The men and women sit apart, and the women and girls, with their black headgear, make you think of a congregation of nuns, dead to the world.

At their own homes, however, Peruvian ladies dress much like their sisters in other parts of Christendom. They are fond of gay dresses, and talk much of the fashions. In conversation they are vivacious, and quite able to hold their own with the men. They are interested in politics, and do much to create public sentiment. The women of the better classes are well educated; many of them speak French. All are fond of music, and not a few play the piano, mandolin, and guitar exceedingly well. None of them has any woman's-rights tendencies: so far the new woman has not yet appeared in Peru.

Lima on horseback is quite as interesting as Lima afoot. There are few private carriages. The streets are paved with cobbles, and all sorts of vehicles jolt you terribly as you ride over the stones. For this reason the people prefer to ride in the street-cars or on horses.

The horses of the Pacific coast of South America are small but spirited, and they have a delightful gait—a cross between a pace and the gait of a high-stepping hackney, which carries the rider along as easily as though he were in a rubber-tired carriage. One is coming down the street now. The rider, were it not for the big silver spurs on his boots, would not be out of place in Hyde Park. He is in full riding costume, and his horse is magnificently apparelled. Notice his bridle! It is trimmed with silver, and the stirrups and bit are of the same shining white metal. His saddle is plated with silver, and rests upon a heavy saddle-blanket of fur. How the horse prances as his master touches him with the spur! and how those demure, sombre-clad maidens who are passing by steal sly glances at the rider out of the corners of their eyes! He has stopped and dismounted, and is stooping at his horse's front feet, buckling a short strap about the forelegs, to hobble the animal. He leaves him thus, without tying, and goes into a store. That is the way

all Peruvian horses are fastened. There are no hitching-posts, rings, or horse weights, and it is a police regulation that every horse left alone on the street must be hobbled. The straps used are so short that they can be easily carried in the pocket. The drivers of carts hobble their mules by tying the lines about their fore-feet.

Much of the peddling of Lima is done on horseback, and in many cases the peddlers are Indian women who ride astride. The milk of the city is carried about in cans tied to the sides of a horse, on the back of which, with her legs straddling its neck, sits a bronze-faced woman dressed in bright calico, and wearing a broad-brimmed Panama hat. When the milk-woman reaches the house of a customer, she slides down over the horse's neck and lifts one of the cans out of the pocket in which it is fastened, and carries it into the house. The bread-waggon of Lima is a horse with two panniers full of loaves. Vegetables are also peddled by women. All sorts of things are peddled on donkeys ridden by men or boys, who sit just in front of the tails of the beasts, with their backs against the loads of goods they are peddling. There are no huckster waggons; and the drays are long two-wheeled carts drawn by three mules abreast.




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DOWN THE ANDES OF PERU ON A HAND-CAR

CHAPTER XII

DOWN THE ANDES ON A HAND-CAR

AN EXCITING TRIP FROM THE MOUNTAIN-TOPS TO THE PACIFIC OCEAN OVER THE STEEPEST RAILROAD IN THE WORLD—ITS TRACK CLIMBS UPWARDS OF THREE MILES IN LESS THAN A HUNDRED—ITS COST IN MONEY AND LIVES—THE SCENIC WONDERS OF THE ANDES—HOW ONE FEELS THREE MILES ABOVE THE SEA—THE HORRORS OF SOROCHÉ, OR MOUNTAIN SICKNESS—A SNOWBALL FIGHT IN THE CLOUDS—ON THE EASTERN SIDE OF THE ANDES.

OWN the Andes on a hand-car; coasting upon the steepest railroad in the world; dashing through clouds to find clouds below you; hanging to precipices; rushing along bridges over frightful chasms; whirling around curves, now in the midnight darkness of rocky tunnels, and anon where the light of day makes you shudder at the depths below you;—these have been among my experiences in the past few days. I have climbed to the top of the Andes, and have slid back to the sea.

My trip was over the Oroya Railroad, one of the most wonderful pieces of railroad engineering ever constructed. The road is only 138 miles long, but it climbs up the steepest mountains of the globe. It rises more than three miles in less than a hundred, and its highest point is 15,665 feet above its starting-point at Callao on the Pacific. At its highest point it is still 2,000 feet below the summit of Mount Meiggs. It cuts right through this mountain by a tunnel to the other side of the Andes, and then descends to the valley of the Jauja, through the rich silver-mining region of Yauli, and finally ends at Oroya, an Indian market town 12,178 feet above the sea.

The Oroya Railroad is one of the most expensive railroads ever built. It was costly in both men and money. Seven thousand lives were lost during its construction, and the first 86 miles of it cost \$27,000,000, or over \$300,000 per mile. Between the coast and the tunnel at the summit there is no down grade, and

the speed of our hand-car was regulated only by the pressure on the brake in the hands of an Indian conductor. On many parts of the road the grade is over four per cent or 211 feet to the mile; and at such grades the track winds about and up the Andes, passing through cuts in the solid rock, and through sixty-three tunnels, some of which are of the shape of the letter S. Its track is of the standard gauge, well laid out and in excellent condition.

This road was built by an American, though it was suggested by a Peruvian. Henry Meiggs, a Californian, laid out the road, acted as its engineer-in-chief, raised the money to build it, and superintended most of its construction. The road was originally intended to reach the Cerro de Pasco silver mines, but the \$27,000,000 gave out when about eighty-six miles had been built, and the extension is still some forty-odd miles away from these famous mountains of copper and silver.

The portion of the road above where Mr. Meiggs left off was constructed by the Peruvian corporation under what is known as the Grace contract. The intention is to extend the road ultimately into the Perene, a rich coffee-raising district, thence to the head of the steam navigation of some of the tributaries of the Amazon. The preliminary surveys for this have already been made. The total distance from the sea to the navigable Amazon is not more than 210 miles, but there is at present no sign of the road being soon completed. It is doubtful whether the railroad now pays more than its operating expenses, and it will be long before it will yield dividends in proportion to its enormous cost. Only two passenger trains are run over it a week, its chief business being the carrying of silver and copper ore down the mountains.

The usual journey over this road is taken on the passenger train, which carries the traveller up the mountains one day and brings him back the next. Through the kindness of the American firm of Grace & Co. of Lima, I was taken up on a small engine and brought down on a hand-car, thus having an excellent opportunity to study the railroad and the mountains up which it climbs.

Our special engine was a dainty little locomotive called "La Favorita." It was half engine and half passenger-coach. Its cab was walled with glass and fitted with comfortable seats. It took

the place of the tender which the ordinary engine has for coal, our fuel being coal-oil from the petroleum wells of northern Peru. Our party consisted of the American minister, Mr. Dudley, and his secretary of legation, Mr. Neale, Mr. Sherman, the manager of Grace & Co., a Frenchman named Piper, a Mr. Pierson, an electric-street-railroad man from Ohio, and myself. The engineer and his helper were Peruvians.

We left Lima at seven o'clock in the morning, and spent the whole day on the road, stopping at the most interesting points to take photographs, and going as fast or as slow as we wished.

Lima is situated in the valley of the Rimac river. It is right at the foot of the Andes, and our trip was up the mountains along the course of this river to its source on the summit. At Lima the Rimac is what we, in America, would call a good-sized creek. It is not navigable, and is, in fact, a stream of foaming white water from the top of the Andes to the sea. The descent is so steep that quiet pools are nowhere to be found. The river is a succession of waterfalls, foaming churns, and rushing rapids. During the ride we could often see the river above and below us at the same time, and we went up, climbing the sides of the mountains, cheered on our way by the rushing of the waters.

We first passed through the sugar and cotton plantations which fill the valley above Lima. The fields look like gardens made for show. They are surrounded by mud walls, and the crops are as green as those of the United States in June. We passed a sugar hacienda in which two steam-engines were pulling a cable plough through a field on one side of the track, while on the other side men were ploughing with oxen and wooden ploughs, urging the beasts onward with goads fifteen feet long. Farther on gangs of Indians were working among the cotton with overseers on horseback. The cotton plants were in blossom, and the fields looked like vast gardens of pink and yellow roses. The men weed the plants, and the fields are as clean as any rose garden at home. Here we pass a cotton mill, and farther on we fly past a sugar factory which grinds out thousands of pounds of sugar a day. We notice that most of the rich land is used. It is all watered by the Rimac, for nothing grows here without irrigation.

Now we are in the foothills of the Andes. How bleak and bare and gray they look in the early morning! Not a green spot is to be seen anywhere on the vast walls which here face the sea. We find the ascent difficult as we rise to the mountains behind. The foothills are gigantic masses of soft, silver-gray velvet, where the sun casts its shadows, and of dazzling white where it strikes full in their faces. The only green is the little strip along the banks of the river. Farther on we notice a thin fuz of green cropping out of the gray. It is as though the velvet was sprinkled with a dust of ground emeralds. Here we come across a little cactus, and there a small bunch of weeds.

As we ascend, the mountains grow greener, until at the level of Mount Washington we find them covered with a thin coat of vegetation. At the altitude of Leadville there is plenty of grass, and at one point, at a stopping of our engine, we count forty different kinds of flowers. There are buttercups without number, silver-gray mosses, and flowers of all colors, the names of which I do not know. As I remark upon the vegetation, saying that it is still very scanty, Mr. Sherman tells me that, were it not the rainy season, there would be no green at all, and that at other times of the year the whole western side of the Andes is bleak, dry, colourless, and sterile.

Still higher we come into a region of rock, with bits of soil here and there. In such places every inch of ground is cultivated. The mountains are terraced clear to their tops, and some of them are covered with steps of green built up with rock, so graduated that a man can stand on one of the lower steps and plant the seed, or weed the crops, of the next ledge without stooping over. Some of the fields are not as large as a bedspread, and some on the opposite side of the mountain do not look as big as a pocket handkerchief. Some patches of corn seem almost inaccessible, and remind one of the farmers of West Virginia, who are said to have to plant their crops with the rifle, as the hills are so steep they are unable to stand on the sides long enough to drop the corn in the rows.

We see Indians planting and working in the fields, and pass numerous little villages of one-story houses made of sun-dried bricks, and roofed with thatch or sheets of corrugated iron. In most places the iron plates are not nailed to the huts; they are merely laid upon the rafters and kept there by covering them



RAILWAY VIADUCT IN THE ANDES OF PERU

with stones. Many of the houses are not larger than dog-kennels, and they are quite as squalid as an American pigsty. Their inhabitants, who gather around us at the stations, are of the Peon variety, dark-faced Indian men, women, and children, the latter frightened to crying when I posed them for my camera. They have evidently never heard of photographs, and one little fellow howled like a Cherokee Indian when I pointed the instrument at him.

I will not say that the Andes are more beautiful or more impressive than the Alps, the Rockies, or the Himalayas, but they surpass them in some respects, and their wonders are their own. Here the mountains rise almost abruptly. You ride for miles between walls of rock which kiss the sky thousands of feet above you. Some of the rocks take the shapes of gigantic cathedrals, very temples of the gods, their spires hidden in the clouds. Others look like vast fortifications, walls of rock to shut the nations of the West away from the riches of this great continent. There are no pretty bits of scenery such as you see amid other mountains. All is on the grandest and most terrible scale. In our ride, we climb along the sides of these walls. Now we pierce them by a tunnel high up in the air, and, higher still, see another tunnel which we shall reach later on. In going from one tunnel into another we cross gorges, on an iron network of a bridge, which looks awfully frail as "La Favorita" passes over it.

Now we pierce a wall of rock where a river has been turned aside that it may not interfere with the road, and then by a winding tunnel we dash out into what is called "the Infernillo," or hell. It is a slender iron bridge two miles above the sea, high up between walls of rock. Far below we see waters rushing, and out of the wall we have left a great torrent of foaming water plunges. Before us, at the other end of the bridge, is another wall of rock in which is a black hole pierced by the track, and, as we look upward between these walls, we see, as through a narrow slit, the blue sky of heaven above this Andean hell.

There are several such hanging bridges on the route. We stopped at the Veruguas bridge, which spans a chasm 580 feet wide, and hangs to tunnels 300 feet above the Veruguas river. Some time ago this bridge was swept away and, for months, both

passengers and freight were carried across on a cable, the little car running on a rope stretched from wall to wall across the frightful chasm.

At times we saw tunnels above and below us. The road goes up its steepest places in a zigzag route, so that at one time we counted five tracks running almost parallel below us.

Almost the whole line was blasted out of the mountain rock. On many places along the line, the hills are so steep that men had to be lowered by ropes over the edges of the precipices to drill holes for the powder which blasted away the ledges for the track. Falling rocks killed some, landslides swallowed up others, and many died of fever.

You can imagine something of the sensation of going down such a road on a hand-car. The reality is wilder and more exciting than one can conceive. The hand-car on which I rode was of the rudest order. It was merely a platform five feet long, and a little wider than the track, on four ordinary car-wheels. On the front part of the platform a strip of wood two inches thick and about as wide was nailed, and at the back was a seat much like that of a farm waggon. The seat was just wide enough for three. The conductor, a brown-faced Indian, sat in the middle, with his hand on the brake in the centre of the platform. Mr. Sherman and I sat on the right and left, our feet braced against the strip on the floor of the car, and our hands on the side and back of the seat, holding on for dear life as we rushed down the mountains. The only means of stopping the car was by the brake, and the danger as we rushed through the tunnels was not only that the car might jump the track in going around the curves, but also that we might meet a donkey or an Indian coming through. The rocks in many places are loose, and the possibility of a landslide is such that a hand-car is always sent five minutes ahead of the regular passenger train to see that the road is free. At one time we chased a cow for about a mile, and at another two llamas blocked the track for a few moments. At times the road seemed to go down at an angle of forty-five degrees, and many of the severest grades were along the edges of precipices, or where we seemed to be clinging to walls of rock. I cannot say that I was not afraid, nor that my heart was not often in my mouth, but I will say that the experience was such that, knowing what I now do, I would risk

the journey again to feel the same exhilarating sense of pleasure and danger combined.

The sensation of standing on the top of the Andes was also worth experiencing. As we climbed up and up above Casapalca, which is about 14,000 feet above the sea, the air grew colder and rarer. We rode out of a heavy rain into a dense snow-storm. Soon we were in banks of snow. The mist and the clouds surrounded us so that we could not see twenty feet beyond the car. We rode through the clouds and saw the storm sweep down the Andes below us. As the mist disappeared, we caught a glimpse of the country through which we had been passing, and shuddered as we looked at the precipices over which we had gone. Mount Meiggs was almost straight above us, and we stopped the engine a moment in front of the black mouth of the Galera tunnel on the very roof of the South American continent. Behind us all the waters were flowing into the Pacific. On the opposite side of the tunnel the waters find their way through the Amazon into the Atlantic. The dividing of the waters is, in fact, within the tunnel itself, and you could really stand at a certain point in the Galera tunnel and drink from waters which will lose themselves in both oceans. I did not do this, for the interior was as dark as pitch, and I was too anxious to see the other side of the Andes.

We passed through the tunnel, and stopped "La Favorita" at the other side, amid some of the grandest scenery of our journey. The mountains all about us were capped with snow. Over us towered Mount Meiggs, 17,575 feet high, its top a-half mile above where we stood. Our altitude was more than three miles above the sea. We were on the highest railroad point in the world, far higher than the top of Fujiyama, the snow-capped mountain of Japan, almost as near to heaven as the top of Mount Blanc, a thousand feet higher than Pike's Peak or any mountain in Colorado, higher than Mount Whitney, and, in fact, higher than any mountain in the United States outside Alaska. As I looked at the grandeur about me I felt like the expressive but not irreverent cowboy who woke one morning in the midst of the Alps. His method of showing his approbation had always been by a hurrah, and when he looked up at the snow-capped peaks rising one upon another as far as his eye could reach, he could contain himself no longer, and throwing his hat into the air with a cowboy yell, he exclaimed, "Hurrah for God!"

This was how I felt, but I acted differently. My voice was so weak from the rarity of the air that I could not have whistled a dog. At about 10,000 feet above the sea, the conversation of our party began to flag. On the outside platform of "La Favorita" it was almost impossible for us to talk to one another, and I found myself again and again weighing my thoughts to decide whether they were worth the breath it would take to utter them. Any kind of exertion took triple strength. My boots suddenly grew heavy, and I changed my step to that of an old man. At the eastern end of the Galera tunnel we stopped amid banks of snow, and Mr. Sherman and myself had a snowballing fight up there in the clouds. It was not an exciting contest. Every throw sent our hearts into our throats, and we had to stop and pant for breath. After this, when we walked at all, we went very slowly, and in climbing up the hills we crawled. As the day went on, the uncomfortable feeling increased. We descended about 1,000 feet, and stopped for the night at Casapalca, where there is a big silver and copper smelter owned by Americans, and where we were received by the vice-president of the company, Captain H. Guyer, an Idaho mining engineer, who made us at home and put us up for the night. Before we got to the house, the Frenchman and Mr. Pierson were attacked with soroche, or mountain sickness, a disease common to strangers in high altitudes; and later on all members of the party were more or less affected. My attack did not come until midnight. I awoke feeling as though the top of my head were rising into the air. I had a terrible pain in the temples, cramps in my legs, and at the same time a strong inclination to vomit. I lay on my back all night, to give my lungs as full play as possible, and hardly slept a wink. I managed to get up at daybreak and drink some coffee, and by keeping out of doors recovered sufficiently to take my hand-car ride down the mountain. Mr. Sherman fared even better than I, but Secretary Neale said that, between the smell of sulphur from the smelting furnaces and the soroche, he thought he was in Hades, and he dreamed all night that a hundred devils were dancing on his chest.

The soroche is common throughout the Andes. It usually begins at the altitude of 12,000 feet. With some people it does not last more than a day or so, and then passes off. With others it is very serious. The first symptoms are pains in the head

and nausea, then comes vertigo and weakness of sight and hearing; fainting fits follow, and blood flows from the eyes, nose, and lips. Those who have weak lungs are liable to hemorrhages; and those whose hearts are weak are liable to drop dead. It is especially hard on full-blooded and stout people and those addicted to liquor and high living, but healthy, thin people of temperate habits soon get over it.

CHAPTER XIII

IN THE HEART OF THE ANDES

THE JOURNEY UP THE MOUNTAINS FROM MOLLENDO TO PUNO—ACROSS THE PAMPA DE ISLAY—A VISIT TO AREQUIPA, THE CHIEF CITY OF SOUTHERN PERU—THE HARVARD OBSERVATORY, AND ITS WONDERFUL PHOTOGRAPHS OF THE SOUTHERN HEAVENS—MOUNT MISTI, THE HIGHEST METEOROLOGICAL OBSERVATORY ON EARTH—THE PLATEAU OF PERU, AND ITS CURIOUS PEOPLE.

I AM in the attic of the South American continent, in the heart of the Andes, on what, with the exception of Tibet, is the loftiest tableland of the globe. At my feet lies Lake Titicaca, and looking down upon me is the snowy peak of Sorata, which, next to Aconcagua, is the highest of the Andes. For the past week I have been travelling in these mountains, among which are the highest places of the earth where people live. Back of Lima I visited a village more than three miles above the sea; there are mining camps near Titicaca at an elevation of 16,000 feet; and during my railroad journey to Puno, where I am now writing, we stopped for water at Vincocoya, near a locomotive roundhouse which is higher up in the air than Pike's Peak.

Leaving Lima I went south by sea to Mollendo, and thence to Puno over one of the steepest railroads of the world. I am now three hundred miles inland from the Pacific, on the mighty plateau of Titicaca, which is upheld between two of the Andean ranges at a height of more than 12,000 feet above the sea.

The wonders of the Andes grow upon me. Their scenery here is as grand perhaps as at any point in the 4,000 miles of their length. Think of peaks which pierce the skies at four miles above the level of the ocean. Let them be covered with glaciers, snow, and ice. Make a wall of them, bathe their feet in a lake of silver studded with emerald islands, paint their sides and tops with the vivid colours, shades, and tints of the Andean skies, and you have a faint idea of my surroundings.



SNOWFIELDS AROUND ACONCAGUA (Alt. 23,900 feet)

The journey up the Andes was a continuous panorama. I am on the Pacific ocean in front of Mollendo. There it lies, a shabby wooden town on the ragged edge of the Peruvian desert. Our ship has cast anchor in the harbour, lying outside, for the surf rolls in with great force, striking the black rocks and sending the diamond spray fifty feet into the air. It is so rough that the baggage has to be lowered with ropes into the boat which is coming to the side of the steamer. I jump far down to get into the boat, feeling my stomach rise as I sink into the deep.

As our brawny coffee-coloured boatmen pull for the wharf, we roll about terribly. We pass between huge rocks, now grazing a great boulder, and now running into a lighter which is bringing out a cargo of goods to the steamer. It is difficult to land, and I pay four men two dollars to carry my trunks up the hill to the custom-house.

A little later I am seated in the railroad car which is to take me over the Andes. The first stopping-place is to be Arequipa, which, though only a hundred miles inland, is higher up in the air than the top of Mount Washington. Our train first skirts the coast, and then shoots off into the bare foothills of the Andes. There is not a shrub, not a vestige of green. We climb up the hills, now winding about in horseshoe curves, and now seeing the tracks over which we have passed running parallel with us, but far below. Now we are on the side of a mountain facing the ocean. The sky-blue Pacific, hazy and smoky, stretches on and on toward the west until its delicate tint fades into that of the sky. A patch of gray sand skirts the foot of the brown hills, separated from the blue water by the silvery surf which is dashing its waves on the shore.

The scenery changes at every puff of the locomotive. Nowhere does Mother Earth wear more royal garments than here. At times the Andes look like masses of blue and brown plush. The clouds, although of a fleecy whiteness, so interrupt the rays of the sun that they cast shadows of velvet upon the hoary hills, and at times it seems as though the ink-bottles of the heavens had been spattered over the mountains. In other places the sun tints the mountains with delicate blues, which fade into lighter blues in the distance, until the whole range seems a billowy, waving sea of blue, dusted with silver, rolling on and on until at last it loses itself in a silver-blue sky.

Winding in and out among such hills we rise to the extensive desert, the Pampa de Islay. Here everything is gray or dazzling white. Huge mountains of travelling sands, tons of bleached bones of animals which have died trying to cross the desert, meet the eye; the only things apparently living are the mirages which, in the shapes of cool lakes, inverted cities, or luxuriant vegetation, now and then meet the thirsty traveller's eye.

At the little town of Vitor, a mile above sea-level, we come to the end of the pampas, and then again begin to ascend. We



AREQUIPA, PERU

are soon in ragged hills. We travel among the clouds, and close our first day's journey at Arequipa, in the midst of the desert, 7,500 feet above our starting-point.

Arequipa is the second city of Peru. It lies in the little valley of the Chile river, whose waters here make green about fifty square miles of irrigable land. The city is one of the neatest, prettiest, and brightest of South America. It is more than four hundred years old, and has been battered and knocked to pieces by the earthquakes of the past; but it looks as though it had come out of a bandbox, and seems almost brand-new. The



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A STREET IN AREQUIPA, PERU

houses are chiefly one-story stone boxes, with walls painted in the most delicate tints of blue, pink, cream, green, and gold. I mailed my letters in a post office tinted in ashes of roses, I bought fruit for breakfast in a sky-blue fruit store, and cashed a draft on London in a bank whose outer walls were the colour of gold.

Another peculiarity of Arequipa is its vault-like rooms. The stores are vaults from ten to fifteen feet wide, and from ten to thirty feet deep, with doors fronting the streets. In many of them there is no way out at the back, and the only light except that from the door comes through holes in the roof. I ate my dinner at the hotel in a vault, I was shaved in a vault, and slept in a vault. I went out on the roof once or twice to look over the city. The vaulted roofs give it the appearance of a Chinese graveyard or a city of bake-ovens.

The streets of Arequipa are narrow, and they are paved with cobbles. Down one side of each street flows a stream of mountain water, which, as it gurgles along, makes you dream of rain, so that when you awake in the morning you go to the window to see if it is really clear or not. In Arequipa it rains only a part of the year, but when it does rain, it pours. At such times the streets are flooded, and the water from the roofs is carried out through tin pipes about as thick as a broomstick to just over the middle of the sidewalk, where it flows down the necks of the unwary passers-by.

Every house in Arequipa faces the sidewalk, every window is covered with iron bars, and the locks on the doors are of mammoth size, so that the houses look like small fortresses. The barred windows and locked doors, however, are not to keep thieves out, but to cage the girls in. The windows have seats behind the bars, but no Peruvian beau stops to chat at them with his lady-love. The bars are as thick as one's finger, and so close together that the most ardent lips could not meet between them.

The seclusion of the women by the Spanish people is probably a relic of their admixture with the Moors, centuries ago. It is the same with the black costumes which the women wear in the streets. Not long ago their heads were wrapped so closely in black shawls that only one eye showed out, the features being more concealed than those of the women of Morocco. Now the

whole face is exposed, and many of the women of the upper classes wear hats.

The Peruvian parent believes in keeping his daughters somewhat secluded. The custom here is the same as in Colombia, Ecuador, and other Spanish-American countries. When a young man calls on his sweetheart he is expected to entertain the whole family; and when he invites her to the bull-fight he takes mamma, auntie, and old-maid Sissy with him.

The most interesting thing in Arequipa is an American institution—the Harvard observatory. Some years ago Uriah H. Borden gave \$200,000 to Harvard College with the understanding that it was to be used to establish an observatory at the best place in the world for the study of the stars and meteorological conditions. The college authorities first tried different points in Colorado and California, and then sent an expedition to South America. The scientists of this expedition first experimented at a place in the mountains back of Lima, 6,600 feet above the sea. In 1890 they removed to Arequipa, and there established an observatory which has become one of the great scientific centres of the world. The observatory is situated back of the city at an altitude of 7,550 feet above the sea. It is in a region where it is said there are more clear days and nights to the year than almost anywhere else on the globe. There are fully nine months when the sky is perfectly clear, and the rest of the year is such that astronomical work can go on almost all the year round. Arequipa has also the advantage of being south of the equator, at one of the best points for viewing the constellations of the southern hemisphere.

Americans who pride themselves on having beautiful skies cannot appreciate what the words mean until they have visited South America. Nothing is duplicated in the heavens, and South America has stars and constellations which we do not have in the north, and the Milky Way south of the equator is far more brilliant than with us. You have all heard of the Southern Cross, which enthusiasts say looks like the handwriting of God on the face of the sky. There are only four stars in it, and these are so comparatively small that they would not attract attention were it not for their configuration.

The best records of the southern heavens are those taken by our Harvard scientists at Arequipa. They spend their nights



GREAT TELESCOPE IN AREQUIPA OBSERVATORY

photographing the stars. They have four great telescopes, which night after night throughout the year are pointed at the skies. Each telescope has a photographic apparatus, so hung and so connected with fine machinery that it moves with the stars in their courses, so that their images can be registered on the photographic plates. About fifty negatives are made every night, and about 5,000 plates are annually exposed and developed. The negatives are shipped at once to the University of Harvard, at Cambridge, Mass., where they are kept on file for study in scientific work, forming, as it were, an astronomical library of the southern heavens. At the same time the scientists of Cambridge are always watching the northern heavens. The Arequipa observatory takes in the sky from the equator to the South Pole, and the records of the two observatories give a view of the heavens as a whole.

Within the last few years the Arequipa astronomers have established a meteorological station near the top of the volcano El Misti, at an altitude of 19,200 feet. This mountain is one of the highest of the Andes. It is just back of Arequipa, standing out against the horizon almost alone in its grandeur, its top kissing the sky at an altitude of 20,320 feet above the sea. It is more than a mile higher than our observatory on Pike's Peak, and is over 3,500 feet higher than any other scientific station of the world. The site of the station is on the edge of a huge crater, which now and then sends clouds of yellow sulphurous vapor a thousand feet into the air.

At this great altitude, nearly four miles above the sea, the Harvard men have the finest of scientific instruments for registering the conditions of the atmosphere, the velocity of the wind, the pressure of the barometer. The instruments are, of course, automatic, running for three months without being touched. No one could live at such an altitude, but the observers go up periodically to get the records and re-wind the instruments. The trip is a very arduous one. Some of the men get soroche, or mountain sickness, and many cannot make the trip at all.

I left Arequipa in the early morning, and occupied the whole day in going over the coast range of the Andes to Lake Titicaca. The trip was made by way of the Puno and Arequipa Railroad, one of the most expensive ever built, the cost having been \$44,000,000, or about \$135,000 per mile. The road, includ-

ing the branch line from the lake toward Cuzco, the famed capital of the Incas, is 327 miles long. It crosses the Andes at an altitude of 14,666 feet, and has but few tunnels, though many cuttings. It was built by Mr. Henry Meiggs, the American engineer, who also constructed the Oroyo Railroad from Lima, as already described.

The present manager of the road is an American, and all the rolling-stock is of the American pattern, although of late the cars and engines have been made in the company's shops at Arequipa. I visited the shops and found about four hundred Peruvian labourers engaged in all kinds of car and engine construction. The American foreman told me that the men were quite as good mechanics as those we have in our shops at home, but that they worked for much lower wages. Men employed in the shops receive seventy-five cents and upwards per day. Trackmen and brakemen get seventy-five cents a day, conductors from \$30 to \$65 a month, and engineers \$100 a month. The ordinary day's labour is one of nine hours, but with the men on the road the day lasts without extra pay until the cars come in. Trades unions are unknown, and the men never strike.

Arequipa is the half-way station on this railroad. The trains all stop there over night, the remainder of the journey requiring a day. After leaving Arequipa we rose rapidly, and at eleven o'clock were two miles and a-half above the sea. This was at the station of Punta de Arrieros, consisting of a few stone huts thatched with straw, and a dining-hall made of Oregon pine. At one end of the dining-room there was a bar presided over by a fat Peruvian girl. The breakfast table was at the opposite end, and the meal, which cost fifty cents, was quite as good as any fifty-cent meal served at our railroad stations in the Rocky Mountains. The bill of fare was: chicken soup with rice, well-browned codfish balls, boiled beef and green peas, beefsteak with onions and red pepper, a sweet omelet, and some very good tea. After breakfast I bought four clingstone peaches of an Indian girl for two cents, and three oranges for a nickel. This fruit came from the irrigated valleys of the lowlands.

On the high plateau over which we travelled there was only a scanty growth of moss-like grass. There were no trees and no cultivated crops except little patches of potatoes, barley, or quinoa about the widely scattered mud huts. The barley is grown only

for forage, as it will not ripen so high up in the air. The quinoa is a plant peculiar to the Andean highlands. It is like a cross between the red dockweed and the mullen plant, has yellow or red leaves, and seeds of white, each about as big as a pin-head. Its leaves are eaten like spinach, and its seeds are threshed out and boiled with water or milk into a mush, looking when cooked much like oatmeal or ground hominy. The quinoa is cultivated, being planted in rows, and hoed. It is the hardiest food grain in the world.


After crossing the coast range of the Andes the grass became greener, and we passed through a vast plain of rich moss. We went by beautiful lakes, and rode over plains dotted here and there with the mud huts of Indians. We passed large flocks of llamas, alpacas, and sheep, each flock tended by an Indian woman, who wore a black or blue dress, and a queerly-shaped hat not unlike the turned-up broad brims of the Catholic priests. Each shepherdess had a spinning spool in her hand, and spun away as she watched.

At the stations we saw many Indians. The men wore bright-coloured shawls, or ponchos, and wide pantaloons slit up at the back as far as the knee. Each had on a knit cap much like a nightcap, with flaps coming down over the ears, and on the top of this a little round felt hat, which was apparently more for ornament than warmth. With the men were women dressed like those in the fields. All were in their bare feet, although the weather was bitterly cold, and the hail at times came down in torrents, whitening the ground.

CHAPTER XIV

STEAMBOATING ABOVE THE CLOUDS

LAKE TITICACA, THE HIGHEST OF NAVIGABLE WATERS—IT IS HALF AS LARGE AS LAKE ERIE, AND TWICE AS HIGH UP IN THE AIR AS MOUNT WASHINGTON—HOW STEEL STEAMERS WERE BROUGHT TO IT ON THE BACKS OF MEN AND MULES OVER PASSES HIGHER THAN PIKE'S PEAK—ITS SACRED ISLANDS, AND THEIR WONDERFUL RUINS—THE CURIOUS INHABITANTS WHO LIVE UPON ITS SHORES—BALSAS, OR NATIVE BOATS MADE OF STRAW—CURIOUS ANIMALS ABOUT TITICACA—THE LLAMA, THE VICUÑA, AND THE ALPACA.

TEAMBOATING above the clouds; floating calmly on the highest navigable waters of the globe; sailing under the glacial snows of the loftiest peaks of the Andes, so near the sky that heaven and earth seem to meet around you, and to make you feel that you are on the roof of the world;—such have been my experiences for a day and night on Lake Titicaca. As I write, the United States is sweltering under the hot sun of an American summer. It is always winter on Lake Titicaca—a cold, wet winter during half the year, and a cold, dry winter during the remainder. At times the winds from the Andes sweep over the waters like a blizzard, and again it is as calm as the Dead Sea in midsummer. The air is now as fresh as a sea-breeze. It is cold and bracing, but so rare that when I walk fast my heart leaps up into my throat. Some of you often go to Mount Washington to avoid the heat of the city. Lake Titicaca is more than twice as high up in the air as the top of Mount Washington, and it is situated amid scenery which is infinitely more grand. Titicaca is almost as big as Lake Erie. It has a greater average depth than Lake Superior, and its scenery is a combination of the beauties of Lakes Lucerne and Geneva and of our beautiful Lake Champlain. Our great lakes freeze over during the winter. Titicaca never freezes.

I have written of the skies of the Andes. Those of Titicaca have all the beauties of the Andean heavens combined with others

peculiarly their own. I cannot describe the sense of loftiness one has here. The clouds rise up about the shores of the lake like walls upon which a canvas of heavenly blue fits closely down, making one feel that beyond the walls there are mighty depths, and that if one should sail through them he would drop into space.

The air is so clear that you can see for miles. Soon after leaving Puno, Peru, I was shown the sacred blue island of Titicaca, fifty miles away. A little later on other islands came into view, apparently floating on the waters as though they were balloons or balls, and not the outcroppings of the highest mountain chain of our hemisphere. One island rose out of the water in the shape of a gigantic mushroom of soft blue velvet; another looked like a mammoth whale, whose head and tail stood out high above the surface of the lake. These curious shapes were optical illusions due to a peculiarity of the atmosphere, for the islands, when we reached them, looked much like those on other waters.

Lake Titicaca is well known from text-books on geography. They tell us it lies in the Andes about half-way between the Isthmus of Panama and Cape Horn, 12,550 feet above the sea. They represent it as oval in shape, and state that it is 120 miles long and 57 miles wide, and that it has an area of 5,000 square miles. Some of these statements are true: others are merely conjecture. The lake has in reality never been carefully surveyed. It has great bays which have never been explored; in places it winds in and out like a river, affording a succession of beautiful views of islands, mountains, and coast.

In crossing from Peru to Bolivia we sailed a distance of 110 miles over water which was in many places, the captain said, more than 1,000 feet deep. Lake Superior has an average depth of something like 600 feet. Some parts of the bottom of Lake Titicaca have never been reached, and the captain told me that, if he should land on certain parts of Titicaca island, he would have to cast anchor high up on the rocky shores, as the waters which wash them are so deep that the grappling-hooks could not reach the bottom.

Think of a body of water like this at an altitude of more than two miles above the sea! It is more than three miles from the ocean, in a basin, which, next to Tibet, is the loftiest inhabited plateau of the world; remember that you must cross a

mighty desert and climb on the railroad over a pass which is nearly three miles above the sea to get to it, and you have a slight idea of Lake Titicaca. You must add, however, that, while it is fed by the snows and glaciers of the Andes, it has itself no visible outlet to either ocean. Nine rivers flow into it, but only one carries off any part of its waters. This is the Desaguadero, which connects it with its little sister, Lake Poopó, which lies about 280 miles farther south on this same Bolivian plateau. In this distance the river has a fall of 500 feet. It is a rushing, turbulent stream, big enough to be navigated by steamers for a part of its length. It carries off a large volume of water, but Lake Poopo has no outlet to the sea; and, notwithstanding this drain, Lake Titicaca remains at the same level, whether the season be wet or dry, year in and year out.

Lake Titicaca has many beautiful islands. Most of them are ragged mountain peaks rising out of the water. They consist of rocks with a thin coating of soil. Eight of the islands are inhabited, and are cultivated to the very tops of the mountains. If the United States were as carefully tilled as this part of Peru, it would, I believe, furnish food for all the world, and leave enough grain to glut the Chicago markets during a corner on wheat. Patches of soil no larger than a bed-quilt are walled with stones and carefully tilled. Bits of land between the rocks are green with scanty crops of potatoes, barley, and quinoa, the only things that will grow at this altitude. I see people working on the sides of the hills where they almost have to hold on with one hand while they use their rude little hoes with the other. This grubbing for a bare existence goes on over the greater part of the plateau in which Lake Titicaca lies, the plateau which was once the seat of the Inca civilization.

Lake Titicaca was, indeed, the centre of a mighty empire generations before that of the Incas, for on its shores still stand ruins so old that the Incas could not tell the Spaniards anything about them. They said that the mighty monuments were made by a race of giants who lived about the lake before the sun appeared in the heavens. These ruins lie near the little town of Tiahuanacu. They cover an area of about three square miles, and consist of the remains of massive walls and terraced mounds, and the ruins of a great edifice supposed to have been a temple. The ruins show that the building covered about four acres; it

was made of great blocks of hewn black stone, each 36 feet long and 30 inches thick. The stones, like those of the buildings of Cuzco, were fitted together without mortar so carefully that it was impossible to insert a knife-blade between them. From these ruins some very curious archæological relics have been taken, many of the most valuable having been secured by Professor Adolf Bandolier, who is spending his life here as a collector for the New York Museum.

Professor Bandolier has made many new discoveries about Lake Titicaca, and from his researches he is inclined to believe that much which has been published about this region is pure fiction. He has spent months upon Titicaca island, which some authorities claim was the Garden of Eden of the Inca mythology, the spot on which their Adam and Eve first lived on earth, and whence they started out to found Cuzco and build up the human race. According to this theory our first parents were the children of the sun. There were two of them, Manco Capac and Mama Oello, his sister-wife. On this account, says Squier, one of the authorities on Lake Titicaca, the Incas considered the lake, and especially Titicaca island, holy. On the island they built temples and wonderful palaces, and even brought soil from the mainland, so that corn might be grown. According to one of the old chroniclers, who, Professor Bandolier thinks, had a very lively imagination, this corn was considered so sacred that, when a grain of it was put in one of the public warehouses, it sanctified and preserved all other grains, and when placed in a private granary it insured the owner's having food for the remainder of his life.

There are to-day many ruins on Titicaca island, and the very rock on which Manco Capac and his sister-wife stepped when they dropped from the sun is shown. According to tradition, this rock was once plated with gold and kept covered with a veil. The inhabitants of the island are chiefly Quichua and Aymará Indians, the descendants of those who were so numerous about the lake ages ago. They now live in little huts of mud or stone, thatched with straw, and show no signs of having had gorgeous temples or the more extensive civilization which they possessed when the Incas were their masters. They are Catholics, and are superstitious in the extreme.

The steamboats on Lake Titicaca might be called the steamers of the heavens. They sail at times in and out of the clouds, and are nearest the sky of any similar craft on earth. Think of

lifting an iron ship of 600 tons over a pass higher than Pike's Peak. This is what was done with the steamer *Choya* on which I took a trip. The ship was built in Scotland, brought to Mollendo in pieces, loaded on the cars, and carried over the Andes to Puno, and there put together. It now sails as well, and furnishes its passengers with as comfortable accommodations, as any steamer of its size on American waters. It is as beautiful as a gentleman's yacht, and it can easily make twelve knots an hour. It is propelled by a screw, and its fuel is Australian coal, which is brought over more than 7,000 miles of water and lifted on the railroad over the Andes to Puno, at the edge of the lake. By the time it reaches the ship the coal costs about \$25 in gold per ton, but the traffic on the lake is so great that the steamers pay for themselves and their running expenses many times over.

There are three other steamers on Lake Titicaca; and there are smaller steamers on the Desaguadero river, which carry copper, silver, and tin to the lake from the rich mining region of Oruro, Bolivia. The vessels now belong to the Peruvian corporation, although the line was originally established by the Peruvian government, and the first steamers were placed on the lake at government expense, costing, it is said, more than their weight in silver. They were built in England, and shipped in pieces to the Peruvian coast. Here they were loaded upon the backs of men and mules and carried step by step up the Andes. It took ten years after landing to get them to Lake Titicaca.

Much of the smaller traffic on the lake is done in balsas, or boats made of straw. I can see a dozen straw boats as I write. Some are filled with Indians; and one has a mule, a donkey, and a llama in addition to its human freight. The captain of each boat is an Aymará Indian, who stands up and poles the boat when close to the shore, and manages the sail when out on the lake. Balsas are peculiar to Lake Titicaca. They were used there when the Spaniards came, and before the advent of steamers they carried all the freight of the lakes. They are rafts made of rolls of straw-like reeds so tightly woven together that they keep out the water, and they have straw sails. An extra roll around the top of the balsa prevents the passengers from falling out.

The ports on Lake Titicaca do a large business. Most of the freight from Bolivia is sent over the lake to Puno, thence down the railroad to the seaport of Mollendo. Cargo is brought hundreds of miles to Chililaya on mules, and on steamer days it

is not uncommon to see a thousand mules being loaded and unloaded at the wharves. In 1895 more than \$1,000,000 worth of imports went into Bolivia over Lake Titicaca, and more than \$300,000 worth of Bolivian goods were shipped out. There are now steamers weekly from Puno to Chililaya, and nearly all the passengers and freight to and from La Paz, the largest city of Bolivia, go by this route.

Much of the freight is brought to Lake Titicaca on llamas, the little animals which form the freight-carriers of the Andes. They are to be seen everywhere in all parts of the plateaus of Bolivia and Peru. I pass llama trains every day, and see llama flocks feeding on the plains. The llama is one of the aristocrats of quadrupedal creation, and rightly so, for he is one of the most beautiful of four-footed beasts. He has a camel's head, a sheep's body, and the feet and legs of a deer. From the sole of his hoof to the top of his head he measures about four feet and a-half, and from his feet to his shoulders about three feet. The female is usually smaller than the male, and not quite so strong, but her wool is much finer.

Llamas hold their heads high up in the air as they walk, treading the earth as though they owned it. They are very stubborn, but are not sulky like the camel, although apparently fully as proud. When you load a camel he cries like a baby. The tears roll down his cheeks, and at times he fairly bellows with grief. As he marches off with his load he pouts and pouts, and groans and groans. The llama carries his burden with a proud air, scanning the landscape with his eyes as he goes, and pricking up his ears like a skye-terrier at every new thing. He will carry only so much, his usual load being 100 pounds. If you put on more, he does not cry or groan, but calmly kneels down and waits until the load is lightened.

If you make a llama angry, he does not bite you, as does the camel. He shows his contempt by spitting upon you. I would rather be bitten by ten camels than be spat upon by one llama. The spittle has a most disagreeable smell. If it touches you it is almost impossible to get rid of the odor. The llama chews the cud, like a cow, and he has a special reservoir somewhere in his anatomy well stored with saliva for such occasions.

Llamas are gentle when well treated. They seem fond of their masters, who are usually Indians. The Indians are also fond of the llamas; they pet them and talk to them as though

they were human beings. They often dye the wool, and sometimes tie bright-coloured ribbons through holes which they make in the llama's ears. When on a journey they always walk beside the beasts, stopping from time to time to let the animals graze. Everywhere on the highlands you see Indian women spinning llama wool from the fleeces and weaving it into cloth. The wool is coarser and longer than sheep's wool, but it serves to make the ponchos and the rough dress of the people of the highlands.

The meat of the llama is eaten by the Indians. It is of a soft, spongy nature, and of a disagreeable flavour. The llama also furnishes the people's fuel. There are no trees or bushes, and no one thinks of using fires for warmth. Fires are only for cooking, and the only fuel is the droppings of the llama. Every hut has a pile of such fuel beside its fireplace, and the better classes of houses have special quarters for it. La Paz, a city of nearly 50,000 people, depends entirely on llama manure for its fuel; and the steam which moves its electric-light plant is created by a fire of this manure. The cooking is all done over such fires, and for this reason I have for the time given up such things as broiled beefsteaks and mutton chops, and am now sticking religiously to soups, fries, and other victuals cooked in pots or pans. In this connection it seems a curious dispensation of Providence that the llama has one place for making his fuel deposits. When possible he uses the same place every day, so that the manure is easily saved.

Llamas have curious habits as to their love affairs. The female, I am told, picks out the male she specially loves, and makes all the advances. It has been stated that the female llamas are not allowed to carry burdens. This is a mistake, for the freight trains of llamas I have seen, numbering many hundreds, have had almost as many females as males.

Other animals of the same genus as the llama live on these highlands. The vicuña is smaller, but far more beautiful. It runs wild, and is often hunted for its fur. The alpaca, which is also smaller than the llama, is celebrated for its fine wool. There are many alpacas about Lake Titicaca. The animals are kept in flocks, and are herded as we herd sheep. They are of different colours, generally black or brown. The wool of the young is as fine and soft as silk, and after a year's growth it becomes a foot long. Several million pounds of it are exported every year, most of it going to Europe.



CHOLO GIRL, LA PAZ



THE VICUÑA

CHAPTER XV

THE WONDERFUL CITY OF LA PAZ

STRANGE FEATURES OF LIFE AND BUSINESS IN THE HEART OF BOLIVIA—THE INDIANS AND THE CHOLOS—MULES AND DONKEYS AS BEER-WAGGONS, BREAD-CARTS, AND HEARSE—A VISIT TO THE MARKETS—THE CURIOUS VEGETABLES AND FRUITS OF INTERIOR SOUTH AMERICA—FROZEN POTATOES—BEANS THAT TASTE LIKE ICE-CREAM, AND INDIAN CORN THAT MAKES FLOUR WITHOUT GRINDING.

THERE is no city in the world like La Paz. Away back from the Pacific ocean, beyond some of the highest mountains of our hemisphere, on one of the highest plateaus of the earth, it lies in a little basin surrounded by natural walls. I have seen the walls of Peking, of Jerusalem, and of Seoul, the capital of Korea. The greatest of them is not over fifty feet high. La Paz has walls a thousand feet high, and on one side of it towers the snow-capped peak of Illimani, one of the three highest of the Andes, which kisses the morning and evening suns at an altitude of about four miles above the sea. Man made the walls of other cities: God made the walls of La Paz. At La Paz the great Bolivian plateau, which stretches away to the north and south almost as level as the waters of Lake Titicaca, abruptly drops so as to form a great pit 1,000 feet deep. In this pit the city is built, its walls of green sloping almost precipitously upward on all sides but one, where the Andes, ragged and torn, rise in rocky grandeur in all the colours of the Grand Cañon of the Colorado.

Coming to La Paz on the stage from Lake Titicaca you ride for forty-five miles across a flat plain, by villages of mud huts, through little farms of barley, quinoa, and potatoes. On your left is the mountain wall of the great Sorata range, the highest but one of the Andes. Away to the right are the hills of the coast range; in front is a seemingly endless plain. The team, of eight mules, is changed every three hours. If you sit with the driver,

as I did, you look in vain through the clear air for the city. It is nowhere in sight. At last, on the brink of a precipice, the mules are pulled back on their haunches, the stage stops, and there below you lies La Paz. It is so far down that you can make out only the outlines. You see a plain covered with terra-cotta roofed houses, jumbled together along narrow streets. Here and there is a church; at one end is the big white penitentiary; and just under you is the cemetery, an enclosure walled with pigeon-holes, in which the dead La Pazites are stowed away at so much rent per year until their descendants forget to pay, and the holes are wanted for another generation.

In getting down to the city the stage winds over a road that curves in and out in loops and figures of 8. You see parallel roads far below you, and at last, having left the heights, you gallop over the cobblestone pavements of La Paz. The town is one of hills and valleys. Its streets go up and down, seeming unusually steep because of the altitude, which so rarifies the air that you can walk only a very few steps without stopping to rest.

La Paz is a perpetual masquerade of bright colours and curious scenes. Even the houses seem more fitted for the stage than for real life. The terra-cotta roofs look so clean in the clear air that you can count the tiles of which they are made. The houses have walls of the most delicate tints of pink, sky-blue, lavender, yellow, cream, and green. They are of one and two stories, so open to the street that you can see much that goes on within. The colours worn by the people on the streets are even brighter than those of the houses. For every white man in the city there are at least five Indians, whose dresses are of the gayest reds, yellows, blues, and greens that aniline dyes combined with the Indian taste for the gaudy can make. The especially bright garment is the poncho, or blanket, with a hole in the centre for the neck, which every Indian man and boy wears. Ponchos are usually made in stripes, yellow, green, red, and black being the favorite colours. Every Indian has also a bright-coloured knit cap, with ear-flaps hanging down on each side of his face, and sometimes in addition a black felt hat. He wears pantaloons cut full at the hips, so that the pockets stick wide out at each side. The legs of his trousers are full, and from the knee down at the back they are slit, showing what at first seem to be wide drawers which flop about the ankles. Closer investigation, however, shows

that they are merely half legs of white cotton sewed fast to the inside of the legs of the trousers, in order that the wearer may more easily roll up the latter when in wet grass or crossing a stream. The Indian women wear queer-shaped felt hats, and their dresses are as gaudy as those of the men.

La Paz has about 62,000 people. It is the chief commercial city of Bolivia, but it has not a street-car, a cab, or a dray. I doubt if it has a dozen private carriages. It has no waggons of any sort, and in going about town everyone walks. All the heavy traffic is carried by mules, donkeys, llamas, or Indians. My trunks are taken from place to place on the backs of Indians at about eight cents a trunk. The bread-carrier of La Paz is a donkey, the skin boxes in which the bread is kept being slung across his back. The beer-waggon is a mule with a large case of bottles on each of its sides; and the furniture-movers, even if the thing moved be a piano, are Indians, who carry the articles on their backs, heads, or shoulders.

All manner of freight is brought into the city on mules, llamas, donkeys, and Indians. The fuel, as I have said, is llama manure. This comes in bags on the backs of llamas. Coca is brought in chiefly on donkeys, and Peruvian bark and rubber from the hotter lands lower down come the same way. I saw an odd load on a mule yesterday. It was a limp bundle about five and a-half feet long, and, perhaps, eighteen inches in diameter, thrown over a mule, so that the ends hung down at the same distance from the ground on each side. Beside it on another mule rode a policeman; and a crowd of Indian women came wailing behind. It was the dead body of a woman rolled up in a blanket. She had been murdered a few days before for about \$50 which she was known to have saved, and the policeman was bringing in the corpse and the criminals.

Next to the Indians the most interesting characters in La Paz are the Cholos, or half-breeds, the offspring of the Indians and the whites. The men dress much like the whites, but the women are clad in all the hues of the rainbow. Some wear shawls of rose-red and skirts of sky-blue; others have skirts of sea-green; and not a few wear skirts as red as the sun at its setting. The skirts are propped out with hoops, and they reach only to the curve of the calf. The women wear shoes of white or yellow kid, with Parisian heels under the instep, and with high tops,

which in some cases end in rose-coloured stockings, but more often in the rosy tint of healthy bare skin. They wear little felt hats of different colours, so that altogether they look very queer.

The Cholos do most of the business of La Paz. A few large stores are managed by Germans, but the smaller establishments are owned by Cholo men and women. The women do as much business as the men, all of the saloons belonging to them.

The average Cholo store is little more than a hole in the wall. Some of the tailor shops, dress-making establishments, and groceries are in rooms not more than ten feet square. Such stores have no windows. The light comes in through the doors, and as you walk by you can see the employer and his hands at their work. Nearly every merchant is also a manufacturer, and in some cases the store is so small that the men sit outside and work in the street.

Much of the business of La Paz is done in the streets. The Indians make most of their purchases in the markets, which are both under cover and scattered along the sidewalks. There is one market in the centre of the city where all the week long people are buying and selling, but where, as in all South American markets, the chief day is Sunday. On that day the streets for blocks about the market-house proper are taken up with Indian peddlers, and all the queer characters of La Paz and the surrounding country are buying and selling. The sight is worth seeing. Let us take a look at it. We walk from the Plaza in the centre of the city down the hill to where Market Street crosses our way at right angles, picking our steps in and out through three blocks of Bolivian humanity, until at last we stand in a living cross of all the hues of the rainbow made by the market people and their customers.

In front and behind, to right and left, the streets are filled with curious people moving to and fro in waving lines of kaleidoscopic colours such as you will see nowhere else in the world. We talk of the Oriental hues of Cairo and Calcutta. La Paz has a dozen different hues to Cairo's one, and the costumes of Calcutta would seem tame among these about us. Reds, yellows, blues, and greens are ever mixing, making new combinations every second. The most delicate tints of the Andean sunsets seem to have been robbed to furnish the dresses. Scores of Indian women are carrying bundles on their backs in striped

blankets of red, blue, yellow, and green; and Indian men and boys are wearing ponchos of the same gorgeous hues. There are ladies in black, with black crape shawls wound tightly about their olive-skinned faces, and with prayer-books and fur prayer-mats in their hands. They have stopped at the market on their way home from church, and some are accompanied by the men of their families dressed in tall black hats, black clothes, and black gloves.

How quiet it is! There is the hum of conversation, the chatter of gossip, and now and then the jangle of bargaining; but the crowd moves in and out without friction, and though there are thousands about us we hear but few footfalls. Take a look downward. Most of the feet about you are bare, and a large number of the Indians wear leather sandals, which make no sound as their owners pass over the streets.

What a lot of babies there are! We have to pick our way about carefully to keep from treading upon them. Some lie on the cold streets and paw the cobbles or play with the merchandise their mothers are selling. Some are too young to crawl, and are tied up in shawls to the backs of their mothers, who go on with their business with apparent disregard of the precious freight. There is one now peeping out of that red shawl below us. Its face is as brown as a berry, and its little black eyes blink at us from under its yellow knit cap, the ear-laps standing out like horns on each side of its face. Another, a few months older, is being dandled on the knees of its Indian father; and on the other side of the street are two little tots taking their meals at their mothers' breasts. Most of the babies are laughing; one or two are crying; some are quite pretty, some are homely, but nearly all are dirty and lousy. There is one whose head is undergoing a search at the hands of its mother, who cracks and eats all that she finds. This business, however, is not confined to the heads of babies. It is common to both the Indians and the lower-class Cholos; and men, women, and children unite in the hunt and the feast, the rule being that the hunter is entitled to all the game he catches, no matter on whose hairy preserves he is pursuing the chase.

Let us stop a moment and notice some of the queer things sold all about us. The wares are spread on blankets or on the cobblestone streets. The vegetables and grains are divided into

piles. There are no weights or measures. All things are sold by the eye. You pay so much for such a number of things, or so much a pile. The piles are exceedingly small, and things are bought in small quantities. Marketing is done only for the day. I doubt if there is a cellar in La Paz, and the average cooking-stove would hardly be big enough for a doll's playhouse in America. Think of carrying home half-a-dozen potatoes from market. That is the size of many of the potato piles offered for sale. Here is a brown-faced Indian girl who is selling some at our feet. I venture you never saw such small potatoes before. They are not larger than marbles, and she offers us eight for five cents.

What queer potatoes they are! Some are of a bright violet colour, some are as pink as the toes of the baby who is playing among them, and some are as black as the feet of the Indian girl who is selling them. Potatoes will not grow large at the altitude of La Paz, and although there are large ones in the market, they come from the warmer lands lower down.

But the most curious potatoes are those known as *chufio*. These are sold in large quantities. We see piles of them at every step as we go through the market. Look at this woman before us. She has a large stock spread out on a blanket in front of her. The potatoes are as white as bleached bones. They are almost as hard, and when you break them apart you find them quite as tough. They are ordinary potatoes so frozen and dried that they can be kept for a year without spoiling. The method of preparation is to soak them in water and allow them to freeze night after night until they become soft. Then the skins are rubbed off by treading upon them with the bare feet, and the potatoes are thoroughly dried in the open air. After drying they are as white as snow and as hard as stones. Such potatoes form one of the chief articles of food of the Bolivians. They are a staple article among the Indians of the Andean highlands. They have to be soaked for three or four days before they can be eaten, and are often served in the form of a stew. I have tasted *chufio* several times. All the life of the potato seems to have been taken out of it, and it is insipid and unappetizing, qualities which are not improved by the frequent sight of the dirty bare feet of the Indians with which the vegetable is sauced.

The Indian corn of Bolivia is also a novelty. Many species of maize are grown here which are unknown in North America. One variety has grains twice as large as those of the largest corn grown by our farmers. One kind is of a bright-yellow colour, every grain being as big as a thumb-nail. When bitten into it crumbles up almost like flour, and with a slight bruising it could be turned into meal. Another variety is white, and a third, called "maize morado," is of a mulberry colour, and has a floury kernel. It is used in making and colouring liquors. The most of the corn sold here is grown in the Yungas country to the east, and far lower down than La Paz.


The fruits are equally interesting. There are fruit peddlers on nearly every square of the city and the market is filled with quinces, pears, oranges, and pineapples. There are sweet and sour lemons, and white grapes each berry of which is the size of a damson plum. There are clingstone peaches as big as the White Heath, and figs and other fruits which we do not have. A peculiar one, known as the "picae," looks like a mammoth green bean-pod. When opened it shows big black beans encased in a pulp which has the appearance of the finest of white spun-silk. The pulp cold tastes much like a finely flavoured ice-cream.

These fruits come from forty or fifty miles lower down on the eastern slopes of the Andes. By going that distance you get into tropical Bolivia, and during a few days' trip can pass through all the climates, from frigid cold to tropic heat. The snow never melts on Illimani; the climate of the plateau is about that of Paris; but in the Yungas and the Beni regions, not far away, there are pineapples and palm trees, wild orange and wild cotton trees, and coffee plantations; also rubber forests in which the Indians gather sap to be shipped down the Amazon to Pará and the United States.

CHAPTER XVI

THE AYMARÁ INDIANS

THE CURIOUS PEOPLE, WHO LIVE ON THE PLATEAU OF BOLIVIA—A NATION OF SLAVES, WHO ARE CONTENTED WITH SLAVERY—A PEEP INTO THEIR HUTS—THEIR FEUDS, AND HOW THEY FIGHT WITH SLINGS—ABOUT COCA, THE FAVOURITE INDIAN CHEW—CHICHA, OR BOLIVIAN BEER—GOATS SKINNED ALIVE TO MAKE BRANDY BOTTLES.

OME of the most curious Indians of South America live on the high table-lands of the Andes. They are the descendants of the tribes which were there when the Spaniards made their first invasion. The most prominent were the Quichuas and the Aymarás. The Quichuas were found chiefly in the highlands of Peru and Ecuador, while the larger part of the Aymarás lived farther south, on the plateau of Bolivia. Both these tribes were ruled by the Incas, and it is their descendants who form the labouring classes of these regions to-day. In form and feature both Aymarás and Quichuas are much like the Indians of Mexico. They have short thick-set frames, reddish complexions, broad faces, and black eyes. Their faces are usually sullen-looking, and they seldom laugh. They are shy and suspicious of strangers. For centuries they have been oppressed by the whites, and to-day they look upon all white men whom they do not personally know as their enemies.

For generations both tribes were enslaved by the Spaniards. They were decimated by hard labour, millions of them being worked to death in the fields and in the mines; and although slavery has been abolished by law, it still prevails. Bolivia is a feudal country, and in it Aymarás men, women, and children are bought and sold with the farms on which they live. The fact that they could perhaps leave on paying their debts does not alter the matter, because it is known that they have such an attachment for their homes that they will stay; and the proprietor,



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in selling his estate, often agrees to deliver his human goods with the property.

Most of the land in Bolivia is owned by the Cholos, or half-breeds of Spanish and Indian blood, and by the whites, who are the descendants of the Spaniards. On each farm there is a community of Indians, who work three days of the week throughout the year for the owner, and the remaining days for themselves. They receive no wages, and are supposed to work instead of paying rent for the spot on which they have built their mud huts, and for the little garden patches about them. If their master has use for only a part of their time, he has the right to hire them out to others; and if they do not obey him he can, within certain limits, inflict punishment upon them. They expect to be whipped, and I have heard it facetiously said that Indian servants grumble when they are not often punished, because they consider it a sign that their master has ceased to like them. An Aymará Indian has in few things any rights that anyone else is bound to respect. It is not uncommon to see one struck to make him move faster or understand more quickly.

Notwithstanding this ill-treatment the Indians stick to their masters. They seem absolutely without ambition and content with their lot. They will work for their masters for nothing rather than for pay from a foreigner, and will fight to the death the Indians of a neighbouring plantation with whom the master is angry or of whom they themselves are jealous. Feuds often exist between the Indians of the farms of a neighbourhood, and gun-fights and sling-fights are common. The sling is the natural weapon of the Aymará. He has the skill of a David, and often kills his Goliath. From behind his hut he watches for his enemy, and sometimes sends a stone crashing into his brain. He takes part in his master's troubles, and will engage in almost any conflict instigated by him.

One of the most curious characters among the Aymará Indians is the pongo, or scullion. All dish-washing, fire-making, and water-carrying in La Paz are done by him. He fetches and carries for the family, going with the cook to market, and bringing home the vegetables and meats. He does all the dirty work of the household, emptying the slops, and cleaning the pots and pans. He sleeps at night on the cold stones inside the street door, and must be ready to open it at any hour to anyone who

knocks. The other servants will not do his work, so that every family is dependent on him. He does all this without wages, the money for his services being collected by his master, who may receive as much as thirty-five gold dollars a year for him.

Many families change their pongo every week or so, often having fifty-two different pongos a year. This arises from a custom which demands that the Indians of each estate, in addition to three days' labour a week, must furnish a certain number of men to attend to the dirty work about the house of the master. The number is larger or smaller according to the number of Indians on the plantation, so that on a large estate many more are furnished than are needed, and some are hired out. The rule is that one man can be made to do such work for only a week at a time, so, when a householder in La Paz makes a contract of this kind for a year's service, he expects to be furnished with a different pongo every week.

The Indian women are the better working half of the family. The men work too, but the roughest and the hardest of the work is done by the women. I have seen them digging potatoes, bending over the hills and scratching the tubers out with trowel-like hoes. I found them everywhere minding the flocks, and spinning as they ran this way and that to keep the sheep and llamas from straying. When an Indian and his wife go together, the woman carries the bundle, and in the markets the Indian woman and not the man sells the goods and does the trading.

The Aymará women are not at all handsome. Each Indian is supposed to have but one wife and the women are exceedingly jealous of their husbands. They will not tolerate the advances of other men, and are, according to their light and customs, very dutiful wives. Marriage ceremonies are performed by the priests. The Indians are devout Catholics and the priests rule them. Every Indian hut has a wooden cross on its roof, and in many huts one finds images of the Virgin with tapers burning before them.

Aymará children are often sold into slavery by their parents. They are bound out, as it were, to the whites for a money consideration, with the understanding that they are to receive a certain amount of education. The law provides that their parents may reclaim them by paying twenty cents a day for the time they have been in service; but as the Indians are never able to

get money ahead the sales are absolute, continuing in force until the child is grown up. Most of the house servants of La Paz, especially the females, have been bought as children and raised by their masters. Each well-to-do family requires a number of servants, one usually being allotted to the care of each child. When wages are paid they range from ten cents to a dollar per week.

The best place to study the Indians is out on the plateau. You see their huts scattered everywhere over it and about them men, women, and children hoeing in the fields, picking stones and tending the flocks. I wish I could take you into one of the huts and show you how the Aymará live. It is not an easy matter; for the Aymará hates strangers and will not admit one if he can help it. I have passed thousands of huts, but have yet to receive an invitation to enter. Once or twice when I asked an Indian to let me look into his home he showed fight, and once when I thrust my head into the door of a hut the owner threatened to have me arrested.

And still when you have explored one of these homes you have seen very little. The average hut would not be a respectable cow-stable in America. Imagine a box-like structure of mud, six, eight, or twelve feet square, with a ridge roof of straw thatch. Let the wall be so low that you can reach the roof without effort. Let the hut have no windows and its only entrance be an opening two feet from the ground, so low that you have to stoop to go through. Let it be so small that you can hardly turn around in it on account of the farming utensils, donkeys, chickens, and llamas which stay in the hut with the people.

The inhabitants of these homes sit upon the floor. They sleep sitting, backing themselves up against the wall and keeping as close together as possible for warmth. In one corner of the hut is a cook-stove, a little hearth or bowl of clay with a pile of llama fuel beside it. There is no chimney and the dense smoke blackens everything, finding its way out as it can.

Aymará cooking is very simple. A favourite dish is challona stew with chuño. Challona is jerked mutton, cured after the following manner: The sheep having been killed is split open and left outside to freeze. The next day water is sprinkled upon it and it is frozen again. It is then hung up to dry and after a

time becomes so tough that it will keep for months. When used it is cut into bits and stewed for some hours. The Indians consider it delicious.

There is one thing that is more important to the Bolivian Indian than his meals. This is his daily, hourly, and I might almost say his perpetual, chew. He begins chewing as soon as he gets his first teeth and he rolls a cud of leaves between his toothless gums when he is on the verge of the grave. Both women and men have their jaws continually going, and it is rare, indeed, to find an Indian without a lump inside his cheek.

And what is it he chews? Tobacco? No, he smokes that sometimes, but the chew he uses is the coca leaf. Coca is the shrub from which cocaine is made. It is a food and a stimulant and the Indians say it keeps out cold and allays hunger. Many of the Aymarás will work for hours on nothing else, and in going over the high mountain passes they chew coca to sustain their strength. They begin chewing at breakfast and chew all the day through. They will not work unless they have an allowance of coca leaves in addition to their wages, the Indians in the mines insisting upon five ounces per man per day. They chew the leaves much as the Siamese chew the betel nut, mixing them first with the ashes of lime. Strange to say, they swallow the juice.

Coca-raising forms one of the chief industries of Bolivia. There are plantations on the eastern slopes of the Andes from where the leaves are brought to La Paz. The plants grow from two to five feet in height. Each plant gives three crops a year. The leaves which are not unlike wintergreen leaves are gathered by Indian women, packed up in bundles of twenty-five pounds and brought to the markets on the backs of llamas and mules.

The favourite drink of the Bolivian Indian is raw alcohol. Drunkenness is to him the acme of pleasure and the most of his earnings goes toward keeping himself and his family in a chronic state of inebriety. On feast days men, women, and children get drunk and keep so until their money runs out. Much of the alcohol is imported, but a large amount is consumed in the shape of aguardiente or sugar brandy, which is carried over the country in goat-skin bottles. The skins for this purpose are torn from the bodies of the goats while still living, as such skins are more pliable and less liable to shrink. The goat is hung up by

its horns, then a cut is made about the neck and the men, seizing hold of the skin, pull it from the body of the tortured and dying animal.

The native beer of Bolivia is chicha. It is made of Indian corn and looks very much like thin buttermilk of a yellowish tinge. It is sold everywhere throughout the country and you find hundreds of chicha shops in all the cities. Those of La Paz are owned by Cholo women, who ladle the beer out of immense earthen jars into glasses much like the "beer schooners" of the North, selling it for a few cents a drink. I have tried chicha several times. It tastes like old buttermilk and is not so intoxicating as our lager beer. It has for ages been the national drink of the Indians, and was in use when the Spaniards came. The process of manufacture is not especially appetizing. The corn is first bruised with a heavy stone, and then handed over to a group of women who chew the crushed grains mixing them with their saliva until they have turned them into a paste which they spit out into a dish or cup. When a sufficient amount of the paste has been collected it is spread out upon a board to dry. It is next put into an earthen vessel as large around as a wash-tub and as high as one's waist. This is filled with water and a slow fire kept under it for three or four days. The fire is then removed and the liquor is cooled and left to ferment. After a week's fermentation it is ready to drink.

Good chicha will easily intoxicate a foreigner, but some of the Aymarás can drink a gallon at a time without being affected by it. At harvest time some of the Indians celebrate the occasion with a feast. The people of each village prepare quantities of chicha and go from one village to another for a grand chicha drunk. They continue drinking until all the chicha is consumed. The women sit around the fire with the men behind them. They pass the chicha first to the men and then they drink. As drunkenness comes on, their orgies grow more and more wild and towards the last they act more like beasts than like women and men.

CHAPTER XVII

IN THE BACKWOODS OF BOLIVIA

AN UNEXPLORED COUNTRY OF VAST RESOURCES GIVEN UP TO SAVAGE TRIBES—
THE CANNIBALS OF THE EASTERN ANDES WHO SHOOT WITH BLOW-GUNS
AND POISONED ARROWS—SOME INDIANS WHO GO NAKED AND OTHERS
WHO DRESS IN BARK CLOTHING—THE RUBBER FORESTS OF THE ANDEAN
SLOPE—QUININE AND PERUVIAN BARK.



BOLIVIA is one of the least-known countries of the world. The geographers are now disputing about its area, and the different estimates vary by more than 100,000 square miles. Señor Manuel V. Ballivian, president of the La Paz Geographical Society, and one of the best-informed men upon such matters, tells me that Bolivia contains more than 567,000 square miles. This is about one-sixth the size of the United States, without Alaska. It is larger than ten states of the size of New York, larger than any country of Europe, with the exception of Russia, and larger than Germany, France, Great Britain, Greece, Switzerland, and Belgium combined.

This vast territory has not as many people as has the State of Massachusetts. Its population is estimated at about two millions, and of these not more than half a million are of white blood. Think of giving a territory one-sixth the size of ours and proportionately as rich in its natural resources to half the people of Philadelphia, and you have about the conditions which prevail here. The whites own Bolivia, and the other three-fourths of the people, who are Indians, are their servants. Of course there are a few exceptions, but as a rule this classification holds good. It is especially so as regards the domesticated Indians, who number much more than half the population, and who are in many cases practically the slaves of the whites. In La Paz there are at least five Indians to every white man.

The richest parts of Bolivia have not been surveyed and several of its provinces are practically unexplored. Some sections

of it are as unknown as central Africa, and their inhabitants have as curious customs as have the savages of the Sahara. Take for instance that strip of Bolivia, several hundred miles wide and about five hundred miles long, which lies between the plateau and the boundary of Brazil. It has resources of great wealth. I have met men here who have crossed it in travelling overland to Paraguay and the Argentines. They tell me of vast plains covered with tame and wild cattle in herds so enormous that they can be bought for from two to three dollars a head, for there is no means of getting them to market. A syndicate was recently formed in London to connect these rich grazing lands with the head of navigation of some of the Amazon branches by a railway which will run along the boundary between Brazil and Bolivia, but on Brazilian soil. The road is planned on the line of a concession granted some years ago to Colonel Church, and its purpose is to carry the cattle to the rubber camps of the Amazon. There are other important projects on foot to build railroads for Bolivia. One is to construct a line sixty-six miles long, from La Paz to the Desaguadero River. Another scheme is to extend the Central North Argentine Railroad to Sucre. This road would pass through a rich cattle-grazing, agricultural and mining territory; it would furnish an outlet to the Atlantic for Bolivian products and open a large part of eastern Bolivia to settlement.

At present it is extremely difficult to travel anywhere in Bolivia. In coming to La Paz from the coast, a distance of nearly five hundred miles, I spent two days on the railroad in Peru before I reached the shores of Lake Titicaca. It took another day to cross that lake. I had to wait at Chililaya a day, and the fifth day was taken up in the stage ride which landed me in La Paz. In going back, I shall have three days of difficult staging from here to Oruro, and then three days upon the smallest of the long narrow-gauge railroads in the world in going down the Andes to the sea. With the same money and time I could comfortably cross the United States from the Atlantic to the Pacific, a distance almost five times as great.

My travels are to be through the most inaccessible parts of Bolivia. Most of the country is to be reached only upon mules or on foot. The American Minister, I find, is about to pay a visit to the capital at Sucre, four hundred miles from La Paz.

He will have to take mules or stage for one hundred and fifty miles to the railroad, and after a short ride on the cars will take mules again for a five days' journey through the mountains to Sucre. The only route from Sucre to the famous mining town of Potosi is a bridle path, and from Oruro to Cochabamba, a town of twenty-five thousand, is a three and a-half days' ride on horseback. Nearly all of the large towns are to be reached only on mule-back or horseback; they are situated on the highlands and in the mountains.

Eastern Bolivia is one of the most interesting parts of South America. I have recently met several men who have gone from La Paz down the rivers which flow into the Amazon, thence to the Atlantic. They tell wonderful stories of the rubber forests, of trees of wild cotton, of plants with fibre-like silk, and of vegetation so dense as to be almost impenetrable. They met savages who are cannibals and other Indians who go about stark naked and regard the laws of neither God nor man. At Lima I met a young German explorer named Kroehle, who had spent three years travelling through the eastern provinces of Peru and among the Indians of the far-away branches of the Amazon. He had a camera with him and made some excellent negatives from which I secured prints. Mr. Kroehle was many times in danger of his life. He was twice wounded with poisoned arrows and he describes the travels through these regions as dangerous in the extreme. He was for a time among the head hunters of the River Napo, in Ecuador and Peru, the first pictures ever taken of these people being made by him.

The Indians of one tribe whom Mr. Kroehle saw near the Napo river wear plates of wood or metal in the lobes of their ears, each plate being as big around as the bottom of the average tumbler. Their ears are pierced when they are children, and at first bits of grass and twigs are thrust through the holes to keep them open. From time to time additional twigs are inserted until the aperture is as large as the inside of a bracelet. The same custom prevails among the Burmese and the natives of Southern India. It is not an uncommon thing in Burma for a woman to carry a cigar as thick as a broomstick, made of tobacco wrapped in corn husks, in the slits of her ears. The Napo River Indians have even larger ear-holes than the Burmese. This, however is their only extravagance of fashion, for both



PACHITEA (PERU) INDIAN

men and women go naked. On the Pachitea river there are Indians who wear waist cloths only; the Mojos of the Beni have long smocks made of bark, and the Guayaros, farther south in the same region, are in full dress when their skins are coated with red and black paint, their legs bound about with garters, and sticks thrust through the cartilage of their noses.

Some of the tribes on the eastern slopes of the Andes, such as the Chacaros, are cannibals; they eat the flesh of their enemies and are especially fond, it is said, of baby roasts and maiden stews. They as well as other Indian tribes of the region use blow-guns and poisoned arrows; the arrows are made of iron wood, tipped with flints poisoned at the points. The guns are reeds, ten or eleven feet long. The poison is so deadly that the slightest scratch of an arrow is fatal, although the meat of the animal killed is not injured. The composition of the poison is kept secret. It is made, I am told, by thrusting the arrows into putrid human flesh which has already been poisoned in some other way.

In trading with the wild Indians it is necessary to carry a stock of goods with you. They do not understand the use of money, for all their dealings are by barter. They are, however, fond of trading and will exchange gold for hatchets, knives, and guns. They wash the gold out of the streams and bring it to the traders in nuggets and in coarse dust. These savages live chiefly by hunting and fishing. There are many wild fruits in the forests and everything grows so easily that it is necessary only to plant the seeds to get a crop. The Indians burn over the ground and plant little patches of corn without ploughing. They plant also onions, beans, and turnips and in some parts of the valley of Marañon they have small plantations of sugar-cane. The cane is ripe at nine months, and the same plants will produce for twelve years in succession.

A large number of Indians are engaged in the rubber camps where they work for the whites, only a few gathering rubber for themselves. Bolivia is increasing very rapidly in its rubber product. It is now exporting about four million pounds of rubber a year, the rubber camps being scattered along the banks of the rivers on the eastern slopes of the Andes. The rubber comes entirely from wild trees, there being but one cultivated plantation in Bolivia. The trees grow best far down in the valleys,

near the foot of the mountain. They are of all sizes, from the size of your leg, to some so large that three men joining their hands could not reach around one of them. In some places there are as many as six thousand trees to the square mile, and there is one grove which contains ten thousand trees on this area.

Getting out the rubber necessitates large capital. It cannot be done successfully with an investment of less than fifty thousand dollars, and the more the money the greater the profit. The trees are all private property, but many of the forests are in the hands of Cholos, who have bought government lands at low prices. They usually have not the money to work them, and are therefore ready to sell at reasonable prices. The gathering of the rubber is all done by Indians, who gash the trees with small hatchets and chisels. A white sap then flows out of the gashes, and this is caught in clay pots and is smoked for the market. As the smoke touches the sap it hardens: it is then so treated that it can be made into balls. These are tied up in nets and carried to La Paz or Lake Titicaca on the backs of donkeys or mules, or are loaded upon boats to be shipped down the Beni and the Madeira to the Amazon.

Bolivia is the land of quinine. We know the bark of the cinchona tree from which quinine is made as Peruvian bark, but it would be more in accord with the facts to call it Bolivian bark. The best quinine is from the bark of trees grown in the Department of La Paz; and Bolivia far exceeds Peru in the number of her cinchona trees.

There are millions of trees growing on plantations in eastern Bolivia. These plantations were established when quinine was high in price and before some of the Bolivian trees had been taken to India and Ceylon, to start plantations there. As a result of the Indian plantations the market became overstocked, and the price of quinine fell. The bark which in 1882 brought in Bolivian money, at La Paz, \$220 a hundred weight, now sells for from \$16 to \$18 a hundred weight, or, taking into consideration the fall in the price of silver, about one-thirtieth of what it brought sixteen years ago. The fall of prices has ruined a great many Bolivian capitalists. More than \$3,000,000 were invested in such estates by the people of La Paz, and the foreign houses who had advanced money on them were severely hurt. The bark at one time was rated so low that it did not pay to cut it and

carry it to market; to-day, however, while there is somewhat of a revival in prices, the margin of profit in the business is small. Quantities of cinchona bark may be seen here every day. The bark is brought in to the exporters on the backs of donkeys, each of which carries two bundles of about one hundred pounds apiece.

Most of the South American quinine product now comes from wild trees which grow at the head-waters of the Beni and the Madeira rivers. It is carried for miles through the forests on men's backs, and then loaded on the donkeys which bring it to La Paz.

So far as I could learn there is no money to be made by foreigners in the quinine business, although any number of good plantations can be bought. A rich planter of interior Bolivia told me that he could buy me eight hundred thousand trees, if I wished them, for less than eight cents of our money per tree. Quinine trees are planted nine feet apart, and after five years an orchard is ready for the market. The trees are then chopped down and stripped of their bark. Sprouts spring up the following season from the stumps, and at the end of another period of five years there is a further crop. The cinchona tree grows wild, and it is to be found wherever the rubber tree thrives; it usually grows to a great height, its foliage forming a magnificent crown to the tree, which is of such a colour that the quinine hunter can pick it out at a long distance in looking over the trees of a forest.




LA PAZ INDIANS

CHAPTER XVIII

A WILD RIDE WITH THE BOLIVIAN MAILS

A GALLOP OVER THE VAST DRIED-UP SEA OF THE MIDDLE ANDES—QUEER SCENES ON THE HIGHLANDS—THE BOLIVIAN COACHMAN AND HIS CRUELTY—NIGHTS IN BOLIVIAN INNS—ODD FEATURES OF FARMING WHERE THE OXEN PULL THE PLOUGHS WITH THEIR HEADS—AMERICAN TRADE IN BOLIVIA.

OR the past three days I have been riding over the high plateau of Bolivia and am now in the middle of it, away up over the Coast Range of the Andes, in the mining town of Oruro. The Bolivian plateau is one of the wonderful tablelands of the globe; it is situated between the two ranges of the Andes, at from 11,000 to 13,000 feet above the sea. The plateau, which runs from north-west to south-east, is five hundred miles long, about eighty miles wide, and has an area as great as the State of Ohio.

The plateau has a soil, a vegetation, and a climate of its own. Its skies seem different from any which hang over the United States. Its people are like none we have on our continent, and my surroundings altogether are such that I seem to be in another world. It is the world of the heights, the highest land of the earth upon which numerous cities and villages exist, a very land of the sky.

The geological history of the Bolivian plateau is largely conjecture. There are evidences that there once lay between these two Andean ranges a vast inland sea, hundreds of miles long, and in places over sixty miles wide, of which the Bolivian plateau is a part. Its waters reached to Lake Titicaca, and thence flowed on through the plateau of Peru. From here they extended southward to the highlands of the Argentine Republic. Where I crossed the plateau from Lake Titicaca to La Paz the ground was as flat as a boarded floor. It is almost level also from La Paz to



A TYPICAL FOREST VIEW

Oruro, and everywhere there are signs that the whole country was once covered with water. I rode for miles over beds of pebbles and boulders and passed over wide stretches of what seemed like sea-sand. Sea-shells are often found here, and there are other evidences that the land, as I have said, was once covered with water.

Professor Agassiz believed that the water once rose some four hundred feet above the present level of the Bolivian plateau. To-day the only large bodies of water upon it are Lake Titicaca and Lake Pampa-Aullagas, or Lake Poopó, the two being connected by the Desaguadero river. Lake Poopó is very near Oruro. It is about as large as Rhode Island, and is a brackish lake deep enough for steamers. It is now proposed to put steamers on it, and should this be done, we may look for a line of ships sailing from Oruro across Lake Poopó and through the Desaguadero river to Lake Titicaca.

My journey from La Paz to Oruro was over this dried-up sea-basin. The distance is 165 miles, most of the road being as smooth and as hard as any in Central Park, New York. There is a stage line which carries mails and passengers twice a week from La Paz to Oruro. The stage-coach has six seats inside and one outside with the driver. In planning my tour I coveted the driver's seat, but on going to the stage office I found that not only it but the whole coach had been reserved. There was no better chance for the next stage, three days later, and for a time it seemed that I should have to go on the back of a mule. At this moment my guide and adviser in ways Bolivian, Mr. Sam Klotz, of La Paz, suggested that I get a seat on the mail coach, where there is always room for one passenger. I jumped at the chance, and readily paid twenty dollars, the price of the ticket. This was several days before leaving. The day previous to starting I sent my baggage to the station, my three trunks going on the backs of three Indians from the hotel to the stage office. When they arrived a second dilemma arose: only 200 pounds of baggage, I found, were allowed to each passenger. My trunks weighed 370 pounds, and it was only by paying \$21 for extra baggage that they were allowed to go with me.

I confess to a feeling of pride when I told my friends at La Paz that I was going to travel on the mail coach. They smiled rather pityingly as I did so, and at the time I attributed their

pity to envy; but I know better now. I know that the Bolivian mail coach is not a gorgeous red vehicle, with postman in livery and magnificent steeds. I had my first sight of it at daybreak on the morning of my starting. It is merely the baggage waggon of the stage, a skeleton waggon on springs. The floor of the vehicle is so high that you can almost walk under it without stooping, and when it was loaded with trunks and mailbags it looked more like a hay waggon coming to the barn in harvest time than the Royal Bolivian Mail. The baggage was tied on with rawhide ropes and was covered with canvas to keep out the rain. There was only one seat and this was occupied by the driver, his assistant, and myself. The seat was at least eight feet above the ground: it had no cushion until I improvised one out of my own coat and blankets. As there was no canopy over the seat, I suffered when it rained and snowed, as it did at intervals on the journey.

Our drivers were Bolivian Cholos, whom I found so cruel to the mules that I again and again protested. Even when first hitched up the beasts were raw and sore; their harness was twisted out of all shape, and their collars did not fit, the ragged rough leather pressing in upon the raw flesh. Every mule had sores on its back, and the legs of some had been almost cut to pieces by the whip. I remember one little yellow mule who had lost two patches of skin, each as large as the palm of one's hand, from the front of his shoulders. When he was harnessed I objected to taking him, as there were better mules in the corral. My protestations were however of no avail; he was hitched up next to the waggon, right under the driver, and we started off on a gallop. The little mule soon began to lag. The driver cut at him with a whip, which brought blood at almost every spot it touched, and the helper, who ran along with the coach and whipped up the lazy mules, picked out the little yellow fellow for his special attention. We had not gone five miles before the backs of the mule's legs were bleeding in half a dozen different places, and I could see that his collar was smeared with blood from sores on his neck. From time to time I noticed that the driver, when he found that his whipping and whistling failed to stir up the mules, took a heavy trace, with an iron chain and ring at the end of it, and rattled it. This never failed to frighten the team into increased speed. As the little yellow

fellow again fell behind, I found the secret of the inspiring sound of the trace and chain. The driver swung the trace about his head and brought it down with a terrible thud upon the little mule's back. It was a wonder it did not break the bones, for the heavy iron chain hit him on the spine, and the pain must have been intense. The blow in this case did not break the skin, though I saw subsequent ones given to other mules which made bloody gashes in their backs. We changed mules every fifteen or twenty miles, and we rarely had a team that was not deeply scarred and bloody when we reached a stopping-place.

On this journey I had a taste of the country hotels of Bolivia. They are more like stables than taverns. The stalls for the mules and the one-story huts which contain the rooms for the human guests are built together, so that one can hear the donkeys bray and the hogs grunt as one goes to sleep. None of the rooms have windows; the floors are of mud and stone, and the beds are mere ledges of sun-dried bricks, upon which mattresses are laid. Most of the rooms have several beds in them, so I seldom slept without room-mates. Before retiring the landlady always came in and collected a "Bolivian," equal to 33 cents of our money, for the use of the bed. She did not give me a light, so I had to use a candle I brought with me, a spot of melted grease on a table or chair serving as the candlestick.

We left the hotels at five o'clock every morning. We usually were up before daybreak and at half-past four a cup of tea and a biscuit were served. This is the first breakfast of all hotels in Bolivia, and it had to suffice for our first twenty miles. At eleven o'clock we generally reached a station for breakfast. This usually consisted of a vegetable soup, followed by dishes of stewed meats swimming in grease. Dinner was served at the close of the day's journey. It was about the same character as the noon breakfast. Luckily I had had a lunch put up for me on leaving La Paz: this cost me ten dollars; but it seemed cheap when I found that it gave me the only food I could eat on the way. And this was upon one of the most travelled roads of Bolivia, where the accommodations are considered extraordinarily good. The fare on the mule trails is far worse, and those who go into the less travelled parts often suffer severely. Their only sleeping-places are in the huts of the Indians, who do not

like strangers and will not entertain them if they can possibly help it. The fact that you offer them money makes no difference; often indeed the only way to get a night's shelter is to enter by force and take possession of the best part of the hut. If there is anything eatable at hand you had better take it and afterwards give the owner some money in payment. If you offer to buy he will refuse; and even when he has plenty will tell you he has nothing. When you leave in the morning you pay him for the night's lodging, and he then thanks you for what he has granted only by force. The Bolivian Indians are great cowards and they will submit even to much abuse without fighting.

I saw the Indians all along the plateau from La Paz to Oruro. Nearly all were working, toiling hard for a bare living. The climate is such that only potatoes, barley, and quinoa will grow, and the soil is so poor that it is only here and there that a patch can be farmed. Indeed the effort to get cultivable land is a serious drawback to industry: in many places the soil is too stony to cultivate; in others cultivation is only possible when the stones have been picked off to make place for the crops. We passed long stretches of country dotted with piles of stones, and I often saw Indian women going along bent double, gathering stones into the held-up skirts of their dresses, and carrying them to the piles.

Parts of the plateau are covered with a scanty growth of grass, upon which herds of sheep and llamas feed. Each herd is watched by an Indian shepherdess, who uses a sling to keep the animals from straying, and with unerring aim sends the stone straight at the llama or sheep that strays to a neighbour's fields. There are no fences in this part of Bolivia. The cattle in the fields are, as a rule, staked or hobbled by tying a rope about their front legs just above the ankles. One often sees a drove of donkeys so fastened.

The farming is all done after the crudest methods. I saw no manure anywhere used, although there were great piles of it lying at each stable where we got a new relay of mules. I am told that the natives know nothing of fertilizers, and that they recuperate the land by letting it lie fallow, or by a rotation of crops.

Most of the farming tools are of native manufacture, the only American tools being Hartford axes. Potatoes are dug by the

women, who use short strips of iron, shaped something like an arrow, with a wide flat stem. This is grasped in the middle with the hand, and the woman, bending double, thus scoops the potatoes out of the hills. Barley is cut with small sickles with saw teeth, and such rude hoes as are used have handles so short that the workers have to bend over toward the ground to use them. The ploughing is all done by oxen with rude wooden ploughs, to which a point made of a flat iron bar about two inches wide is fastened. A long tongue or beam extends from the plough to the yoke, which is tied to the horns of the oxen, the weight of pulling the plough being done with the head, and not with the shoulders as with us.

The ways through the Bolivian mountains are mule trails, some of which have been cut out of the sides of precipices so that you crawl along within an inch of destruction. Now and then a pack mule drops three thousand feet or more, and is usually left to lie where it falls. One often has to dismount to help the mules, and it sometimes takes hours to advance a few miles. The total length of the Bolivian stage lines is less than the distance between New York and Cleveland. Freight is carried from one part of the country to another on the backs of women and men or on donkeys, mules, or llamas. On the way I passed many droves of donkeys and llamas coming to Oruro. Some were loaded with bundles of cacao, while others carried bags of silver ore. Each train was managed by a party of men and women who walked with the animals, never riding them.

Owing to the poor methods of transportation it is questionable whether Bolivia can offer much to Americans in the way of a market. Such goods as are sold must be put up in boxes or bales, of about one hundred pounds each, so that two packages will just form a load for a mule; otherwise the chief centres of trade cannot be reached. The character of the Bolivian people is such that they can never be large consumers. The Indians who form the majority have few wants which the country does not supply. The naked savages of the eastern slopes require nothing. The semi-civilized Indians of the plateau, as I have already said, weave their own clothes of llama wool. They make their cooking utensils of clay and raise their own food.

At present the bulk of the foreign trade is in the hands of the Germans, who are established in all the large towns and who

deal not only in German, but in English and American goods. I saw many American sewing machines in La Paz, and also Connecticut hardware and firearms. The imports of Bolivia, as estimated by one of our Ministers, are about \$12,000,000 a year, and the exports amount to about \$20,000,000, the latter consisting of the products of the mines and forests. From the mines come vast quantities of copper, silver, and tin, and a small amount of gold, and from the forests are taken rubber and Peruvian bark.




BOLIVIAN LLAMAS

CHAPTER XIX

AMONG THE GOLD AND SILVER MINES OF THE ANDES

BOLIVIA'S ENORMOUS SILVER OUTPUT—IT HAS PRODUCED FOUR BILLION DOLLARS' WORTH OF THE METAL—THE SILVER MOUNTAIN OF POTOSI AND THE RICH MINES OF CERRO DE PASCO—THE GOLD MINES OF EASTERN BOLIVIA—THE TIPUANI PLACER DEPOSITS NOW BEING WORKED BY AMERICANS—PROSPECTING IN THE ANDES—THE RICHEST TIN MINES IN THE WORLD.

RURO is one of the chief mining centres of Bolivia. There are rich deposits of silver and tin in the mountains about it, and the work in the mines goes on night and day. There are valuable copper mines not far from here; the whole country, in fact, seems to be a bed of rich minerals. In the Huanani tin district there is a conical mountain containing a network of tin veins, in some of which the pure ore has been followed down for six hundred feet. In the Avecaya district, nearby, the tin lodes are from one to three feet in thickness, now and then widening out into great masses of solid ore; in other mines there are veins of tin from six to eight feet wide. The word Titicaca means "Tin Stone"; the tin, moreover, is so pure that it is shipped to Europe as it comes from the mines. Quite recently tin mines have been discovered near the shores of Lake Titicaca at an altitude of thirteen or fourteen thousand feet above the sea.

The tin is extracted in the same way as in silver mining: the ore is first blasted down and dug out. It is then broken into pieces, and smelted in blast furnaces, and finally run off into fifty-pound pigs.

Oruro makes me think of the larger villages in the Valley of the Nile, with the green fields and the Nile left out. It lies amidst the bare gray hills of a desert. Its streets are narrow and unpaved. Its houses, with few exceptions, are of one story, made of mud bricks and thatched with straw. They are squalid in the extreme, and everything connected with them is dilapidated

and dirty. The town is devoted to mining. It is supported by the silver and tin mines about it, and its people are mostly miners. They are Cholos, for the pure Indians do not like to work in the mines.

One of the largest of the silver mines is just above the city. It is the property of Chileans, though managed by Bolivians. Its capital is \$1,000,000, and its stock is said to be 250 per cent above par. The miners are Bolivian Cholos. They labour half-naked in the tunnels, for the mine is as hot as an oven, and its ventilation is poor. In all about 700 hands are employed, the workmen receiving daily wages equal to thirty cents of our money. Only the best of the ore is taken out of the mines, and this is broken into little pieces and sorted over at the surface. The breaking is done by Indian women, who pick out the rich ore and throw the poorer pieces away. There were about 300 women at work at the time of my visit. They were squatting on the ground and pounding the rock to pieces with hammers. Every one of them was chewing coca leaves, and I could see the fat quids swelling their cheeks. I asked as to the wages paid them, and was told that they worked from daylight till dark for about seventeen cents of our money per day.

It is by such methods, and at this low cost, that most of the silver of Bolivia has been given to the world. The country has had the richest silver deposits ever discovered. Bolivia has produced more than four billion dollars' worth of silver, and should the price of silver again rise she could flood the markets. Her methods of mining have been so wasteful that there are to-day, in the refuse of her abandoned mines, millions of ounces of silver ore which modern machinery could reduce at a profit.

The mineral territory of Bolivia is very large. Deposits of tin and silver are found throughout the mountainous parts of the country for a distance, north and south, of 1,500 miles, and, east and west, of 210 miles. The region is full of abandoned mines, out of which only the richest of the ore has been taken. Some of the mines were opened up by the Spaniards, who forced the Indians to do the work, making them burrow through the earth to get out the ore. Some of the mines have been in operation for centuries; among others the silver mountains of Potosi, out of which have been taken almost three billion dollars' worth of silver.

The mineral deposits of the Andes are in truth comparatively unknown. Peru has silver mines almost as rich as those of Bolivia. It has indeed two thousand different mines, although, owing to the low price of silver, only a few are now being worked. At Hualgayoc, in northern Peru, there are within the area of forty square leagues four hundred silver mines, some of which are producing as much as three hundred ounces of silver to the ton. This is the region which, according to Alexander Humboldt, produced thirty-three million dollars' worth of silver in thirty years. The ore is mined by Indians with hammers and drills; they burrow through the mountains like rats, taking out only the richest parts of the ore. They labour almost naked, wearing only breech cloths, and utter weird and melancholy cries as they work.

They carry the ore out of the mines in rawhide sacks upon their backs. An Indian will climb up a ladder or notched stick bearing 150 pounds of ore and go off on a dog trot with it. At the surface the ore is broken up with hammers into small pieces. It is next ground by rolling circular stones over it and then mixed with quicksilver after the patio process by driving mules around through it. Much of the ore is now reduced to a sulphide and taken in this shape on mules to the coast, where it is shipped to Europe for farther treatment.

The same sort of work goes on at the famous Cerro de Pasco mines, in the Andes back of Lima, and in nearly all the silver regions of Bolivia and Peru. The Cerro de Pasco mines, now in active operation, number more than 300, and about 60 miles away, at Yauri, on the Oroya railroad, 225 silver mines are being worked. Cerro de Pasco has always been thought to be the crater of an extinct volcano. It is situated about 14,000 feet above the sea in one of the bleakest parts of the Andes. The town, which has now 5,000 people, lies in a basin surrounded by barren rocks. The deposits consist of a great body of low-grade silver ore more than a mile and a-half long by three-quarters of a mile wide. This has been worked down to a depth of over 250 feet, at which level numerous tunnels have been driven in to drain the mines. The great trouble is the water, and farther mining can be done only by lower tunnels or heavy pumps. Henry Meiggs, the American engineer who constructed so many great works in Peru, began a tunnel 150

feet below the present level. The work was stopped, however, when 900 feet in from the surface, and at present nothing is being done. The tunnel will need to be extended from 900 to 1,800 feet farther before the ore is struck, and at the present low price of silver there is little prospect of this being attempted.

Within a short time there has been something of a revival of the silver industry at Cerro de Pasco, owing to rich deposits of copper which lie under the low-grade silver ores, and the camp to-day is more one of copper than of silver. In the past the Cerro de Pasco mines have produced enormous quantities. Between the years 1630 and 1824, 27,200 tons of pure silver were taken out of them, and the dumps of the mines, if scientifically worked, would still yield a fortune. Twenty years ago Cerro de Pasco was turning out more than a million ounces of silver a year, and sixty million dollars' worth of silver have already been taken from under the ground where this mining camp now stands. The mines were discovered in the seventeenth century by an Indian who camped out one night near the spot. Before going to sleep he built a fire upon two stones and awoke to find that his stones had melted and that a lump of silver slag had taken their place.

There are but few smelting works in the Andes. One of the largest has been built by three Americans, Messrs. Backus and Johnston, capitalists of Lima, and Captain H. Geyer, an American mining engineer. This smelter is situated on the Oroya railroad, about 95 miles back from the coast, at an altitude of two and one-half miles above the sea. The station is called Casapalca. The smelter is similar to the great smelting works of Denver. The ore is brought from the mines near by and a great deal is carried from Cerro de Pasco, about seventy miles away, on the backs of llamas. It is not an uncommon thing for 1,200 llamas to be unloaded in one day at Casapalca, and during my visit to the smelter I found the yard filled with these curious beasts of burden.

Within the past few years a number of Americans have been prospecting for gold in Peru and Bolivia. They find colour everywhere, but so far have discovered no quartz mines of great value. Professor A. A. Hard, a Denver mining engineer with whom I travelled, says that there are rich veins and deposits of gold in

the Sorata mountains; he predicts that they will some day furnish a gold excitement equal to that of the Klondike.

Several days north from La Paz is the Tipuani river, one of the most famous of the gold streams of the eastern Andes. Its placer mines were worked in the days of the Incas, and from it the Spaniards have extracted large amounts of gold. The Tipuani rolls down the eastern slope of the Andes into the Maperi, thence into the Beni, through which its waters find their way into the Madeira and the Amazon. It is about 300 feet wide, and so deep in most places that the Indians have not been able to reach the bed rock in the centre of the river. So far they have washed only along the banks during the dry season. Their mode of working is to stand in water up to their waists and scrape the gravel together with their feet. When they have made a little pile they dive down and gather it up in pans, often washing fifty cents worth of gold out of one pan of gravel.

Some years ago a Spaniard made a fortune by working one hole in the bed of the Tipuani. He formed a brigade of Indians whom he equipped with rude cows-skin buckets. He then partially drained the river by means of a dam and by passing the buckets of gravel and water rapidly from one Indian to another was able, after three years, to reach the bed rock. Within four years thereafter he took out, it is said, \$140,000 worth of gold dust and nuggets. According to another story, he mined 900 pounds of gold in a single year. In this region some Colorado miners are now working with steel dredges. The dredges were made in Denver and were sent in pieces to Mollendo, Peru, thence up the railroad to Puno, and by boat across Lake Titicaca to Chililaya. From here they were brought over the mountains to the river on the backs of mules. The miners expect to dredge out the Tipuani, and to have the bed rock swept and scraped by men in diving suits.

Most of the gold mining of Bolivia is carried on with native labour on a very rude plan. Take for instance the placer diggings of the Chuguiaguillo river, not far from La Paz. The river has cut a gully several hundred feet deep through the basin in which La Paz is situated. This gully is walled with gravel which contains more or less gold. When I visited the mines a score of Indians were digging down the dirt, loading it into wheel barrows and dumping it into wooden sluice boxes, through

which the water from the river was conducted. On the bottom of the boxes were iron frames so laid that they caught the heavier parts of the gravel and the gold, while the water carried the dirt off into the river. There was no quicksilver used, the miners depending entirely upon the weight of the gold to throw it to the bottom as it went through.

Shortly after I arrived the water was partly turned off and the gravel left in the boxes panned out for the gold. The panning was done by three Indians, who sat on the sides of the sluices with their bare legs in the water and dipped up the gravel into bowls like those we use for making bread or chopping hash. Such bowls are common everywhere in Bolivia for gold-panning. The Indians carefully washed the dirt out of the gravel. They picked it up by the handful and threw it away, looking for bits of yellow metal among the dark stones. After a while the gravel was all thrown out and in each bowl was a little pile of gold pebbles. There was no gold dust, the deposits ranging from bits of pure gold as big as the head of a pin to nuggets as large as one's little finger nail. One of the larger nuggets weighed about half an ounce, and I was told it was worth ten dollars. The gold was all coarse gold, and if there was any dust it was lost.

The gold of this part of Bolivia does not lie in pockets, but is distributed with regularity through beds of gravel. Now and then large nuggets are found. One for instance was picked up out of the mines I have just described two hundred years ago and sold for more than \$11,000. It was sent to Spain and kept for a time in the Museum at Madrid. One day it was discovered that it had been stolen and a gilded imitation left in its place. The director of the museum was arrested, but nothing could be proved against him. The nugget was never recovered. While we were at the mine the skeleton of an Indian was dug up. He had probably been searching for gold and the earth had caved in and buried him.

There are gold fields in Peru which have recently been sold to an American syndicate for \$285,000. There are also regions in Bolivia which could be profitably worked, but it is safe to say that there is no mining country here to which an American who has not capital can come with a reasonable expectation of making a fortune. The Indians have been mining in Bolivia for centuries. In the days of the Incas they worked the gold-bearing

grounds over and over. They were forced to do the same under their Spanish taskmasters, so that to-day the only gold possibilities are those which require the expenditure of large capital and considerable modern machinery.


Prospecting in the Andes is exceedingly difficult. The miner must take his provisions with him, for there is no game to speak of, and it is almost impossible to live off the country. He must carry his own tents, for there are no houses whatever in the out-of-the-way districts. There is no fuel, and the winds of these high altitudes are damp, cold, and bone-piercing.

In the rainy season the grass on the plateau forms a soft mat which so holds the water that going over it is like walking on wet sponges, and no boots can keep one's feet dry. The best of leather is little protection, and rubber cracks and peels when exposed to it. In the dry season the winds and sun of the highlands tan you, and at times the cold is so intense that the natives wear masks of knitted wool to protect their faces. The masks have holes for the nose, eyes, and mouth, and they make their wearers look like Mephistopheles. I used a mask during my travels in the Andes, and found it such a protection that I would not now travel in a cold country without it.

CHAPTER XX

A CHEMICAL LABORATORY OF THE GODS

THE NITRATE DESERTS OF CHILE, IN WHICH THE ENGLISH HAVE INVESTED ONE HUNDRED MILLION DOLLARS—HOW NITRATE OF SODA IS MINED—A VISIT TO THE FIELDS—THE EXTENT OF THE DEPOSITS AND THE PECULIARITIES OF THE NITRATE TOWNS—A LOOK AT ASCOTAN, THE BORAX LAKE OF THE ANDES—SIX-HUNDRED MILES BY RAIL OVER SALTY PLAINS.

EAVING the silver-mining town of Oruro, I came down the mountains on the little narrow gauge which connects it with its seaport, Antofagasta, in Chile. The distance is 600 miles, or about as far as from New York to Cleveland. The track is only two feet six inches wide. It is, I believe, the longest one of this gauge in the world. The cars are of the American style and were built in Massachusetts. They are so small that you feel you are riding in toy cars, rather than on the through trunk line and only rail connection between two great countries.

Nevertheless the road is smooth and well laid. It has ties of Oregon pine and its stations are built of corrugated iron from Europe. The fares are exceedingly high. I paid \$51 in silver for my ticket, and, in addition, \$36 for extra baggage, as nothing whatever is allowed free. My meals at the dining stations cost me \$1.50 each in silver, and when I stopped over night, as I did twice during the journey, the hotel charges were at the rate of \$4 per day. The chief purpose of the road is to carry the silver and other metals to the seacoast. Our train had several cars loaded with lumps of silver ore, and we passed train loads of tin on our way to the Pacific.

The ride was through a desert. Shortly after leaving Oruro we entered the salt plains of Bolivia. These are of vast extent, lining the road for hundreds of miles. In fact, there are but few places between Oruro and the sea where the soil is not more or less mixed with salt, and in some districts salt covers

the land like a sheet of dirty white snow. Along some parts of the line the salt looks hard and icy, and one feels like jumping off the cars for a skate. At other places it lies in gullies, and at still others it only sprinkles the ground and a ragged growth of scrubby vegetation struggles up through it. The road runs for nearly the whole of its length through a desert valley, the salt-covered land reaching away on either side to the hills.

Here and there along the railroad are lakes on which seem to be floating cakes of ice. The cakes are not ice, however. They are borax. One of the lakes is the great borax lake of Ascotan, Bolivia, which has enough borax to supply all the laundries in the world. This lake, it is estimated, has more than 100,000 tons of pure borax ready to be shipped to the outside markets. I saw the lake on my left on the way to the coast. It is about six miles square. The borax (borax of lime) lies in great masses which, when taken out, look like the finest of pure white spun silk, wadded up or woven into lumps. It is not of so good a quality, I am told, as the borax of similar lakes in California. Still it is of considerable value, for the lake was recently sold to a German syndicate for £90,000 sterling.

Lake Ascotan, however, is as a drop in the ocean compared with the enormous value of the nitrate fields which I crossed as I neared the Pacific,—fields so valuable that they could almost pave the desert of Chile with gold. They have produced millions upon millions of tons of nitrate of soda; and it is estimated that more than 1,200,000 tons of nitrate will be shipped from them this year.

The value of the nitrate deposits is such that when they were in the hands of the Peruvians they made that nation rich, and now that they belong to Chile, as a result of her war with Peru, she gets more than half her revenue from the export duties which she collects from them. The working of the fields is in the hands of foreigners and more than \$100,000,000 of English capital is invested in the oficinas or factories through which the nitrate is taken from the earth and prepared for the foreign markets. For years Chile has been exporting from \$20,000,000 to \$30,000,000 worth of nitrate. She annually ships close upon 1,000,000 tons to Europe, and not a small amount to the United States. We buy about \$3,000,000 worth annually, using it for fertilizers and for making powder and high explosives. It is as

a fertilizer that the chief demand for nitrate arises, the bulk of the product going to Germany, where it is used in growing the sugar beet.

There are nitrate fields near Antofagasta, but the best nitrate is found farther north, near Iquique, which I visited. This is the chief nitrate port of the world. During my stay I went out to the fields and visited the factories, spending some time at the oficina of the Agua Santa Company, which has a capital of \$3,000,000 and which produces nitrate by the millions of pounds every month.

But before describing how nitrate is taken out of the earth, let us see where the fields are. In the first place the word "fields" is misleading. It suggests the idea of fences and visible boundaries. The nitrate fields are lost in the desert; their only boundaries are white posts at the corners of the property. With this exception there are no marks whatsoever and no material at hand to make them. There are no stones lying about, and not enough waste wood to fence a city lot. There is not a blade of grass, and only now and then a scrubby tree. Outside the region all is bare gray sand, with here and there a glint of white, where the salt rock has caught the rays of the sun. There are, indeed, few more barren places in the world than the coast of this desert. The upper part of Chile is as bleak as the most arid regions of the Rocky Mountains. It is a mass of sand and rock extending from the shore almost to the top of the Andes. Bordering the coast there is a low range of foot-hills rising in places a mile or more above the sea. Beyond this a rolling valley runs from north to south, and on the other side of the valley are the foot-hills of the Andes.

It is along the western edge of the valley that the nitrate is found. In some places it is not more than 15 miles and in others as far as 90 miles from the sea, but the deposits all lie along the western edge of the valley, forming a strip of an average width of about a mile, which runs irregularly from north to south for a distance of more than 300 miles. In some places the deposit is 4 miles wide, and in others it plays out altogether and crops out some distance farther on. In a few fields the nitrate rock lies on the top of the soil. In others it is found 30 or 40 feet below the surface, with a strata of salt rock on top. The nitrate itself is seldom found pure in nature, though much of the

rock contains from 40 to 60 per cent of nitrate. The Antofagasta rock does not average more than 14 per cent and other fields vary with the nature of the deposit. It is getting the nitrate rock out of the earth and extracting the pure nitrate salts from it that constitutes the immense industry of the nitrate fields.

As to where the nitrate originates there are a number of theories. One is that the desert was once the bed of an inland sea and that the nitrate came from the decaying of the nitrogenous seaweed. Another theory is that the ammonia rising from the beds of guano on the islands off the coast was carried by the winds over the range of coastal hills and there condensed, settled and united with other chemicals in the soil to form the deposit. Still a third theory is that the electrical discharges of the Andes combined with the elements of the air to make nitrate acid. This acid, it is supposed, was carried down through the ages in the floods of the Andes and deposited on these beds in the form of nitrate of soda. None of these theories is entirely satisfactory, and as yet no one has absolutely solved the problem whence the nitrate comes.

We shall see better how nitrate is mined by a visit to the great pampa of Tamrugal. This pampa has 60 miles of oficinas and nitrate fields. A railroad has been built through it to carry the nitrate to the seacoast at Iquique, and on it have grown up vast factories, thousands of corrugated iron huts, in which the workmen employed in the business live, and other buildings, the homes of the well-educated Europeans who manage the properties.

Leaving Iquique the railroad carries you up the hill and brings you right into the nitrate fields. It continues over a plain about 30 miles wide, with low hills rising up to the right and left. On the side of this plain nearest the sea the earth looks as if it had been ploughed by giants; it is covered with mammoth clods of all shapes and sizes. These are the nitrate fields which have been or are being worked. The rest of the land is bleak, bare sand. There is no vegetation and no sign of life of any kind. All is sand salt rock and amid the clods pieces of nitrate rock or, as it is here called, *caliche*. It is a soluble rock of different colours. In some places it is almost white and looks like rock salt. In others it is yellow, and in others still all shades of gray, lemon, violet, and green appear.

The strata of nitrate usually lies two feet or more under the earth, and there is often a salt rock or conglomerate strata above it. The method of getting it out is to bore a round hole, about a foot in diameter, through the upper crust and for a few inches into the soft earth below the nitrate rock. Into this hole a boy is let down. He scoops out a pocket for the blasting powder and arranges the fuse. He is then pulled out and the fuse is lit. With the explosion which follows, a yellow cloud of smoke and dust goes up into the air and the earth is broken for a radius of about thirty feet about the hole. The nitrate rock is now dug out with picks and crow-bars. It is broken into pieces of thirty pounds or less and loaded upon iron carts to be taken to the factories. Each cart will hold three tons of rock, the carts being hauled by three mules, the driver riding on one of the animals.

The factory to which the nitrate rock is taken usually stands in the midst of the field. It is a collection of buildings, with tall smoke-stacks rising above them, containing thousands of dollars' worth of costly machinery, vast tanks for boiling the nitrate rock, crushers like those of a smelter to break it to pieces, and settling vats in which the liquid containing the pure nitrate of soda is left until it has dropped its burden of valuable salt.

The caliche of the Agua Santa fields, as we saw it blasted out of the earth, contains only about 40 per cent of nitrate of soda. The nitrate of soda sent to the markets is 95 or 96 per cent pure, and the rock must be so treated that the impurities will be removed from it. This is done by boiling it, just so much and no more. The crushers first reduce it to pieces about two inches thick. It is then taken to the boiling tanks situated in a building erected upon a framework, so that the tanks are about 50 feet above the ground. Each tank is large enough to form a bath-tub for an elephant. They are 24 feet long, 9 feet wide, and 8 feet deep. In each there are coils of steam pipe by which the temperature of the fluid in the tank can be raised to any desired point. The caliche is carried in cars up an inclined railway and dumped into the tanks. Then water is admitted and allowed to flow from tank to tank in such a way as to act to the best advantage on the salts within. Nitrate of soda will remain in solution at a lower temperature than other salts. This

fact and others of a scientific nature are taken advantage of, everything being done with the greatest care, and the result is that when the fluid is drawn off nearly all the pure nitrate of soda in the rock goes with it.

From the boiling tanks the nitrate of soda flows into other tanks which lie at a lower level in the open air. It now looks like pale maple molasses or thick lemon syrup. In a short time it begins to crystallize and the tank is soon half-filled with almost pure nitrate of soda. This is shovelled out into piles to dry. It is then bagged up in sacks of 300 pounds each and hauled on the railroad to the seacoast to be shipped off to the United States or to Europe.

After the salt has settled in the tanks the liquor still contains a large amount of nitrate. In this case it is conveyed back to the boiling tank, where it is loaded with more nitrate by being flowed over the fresh rock. But I shall not describe the technical details of the process, which is complicated in the extreme. They were explained to me by Mr. James T. Humberstone, the manager of the Agua Santa oficinas, who, of all the nitrate managers, is perhaps the best posted upon such matters. I will only say that the greatest care is taken to get every atom of nitrate out of the rock at the lowest possible cost, and that I was again and again surprised at the careful saving of every cent in product and labour throughout the works. It was indeed a lesson in economy, and when I referred to it Mr. Humberstone said: "The nitrate profits of to-day are a question of small things. Our product is so great that the difference of a cent in the cost of 100 pounds is an important item. It would, indeed, mean to us a saving of at least \$1,200 a month."

Mr. Humberstone also showed me how the iodine of commerce is made from the nitrate liquor. It is a constituent part of the caliche, separate from the nitrate of soda, and it forms a valuable product of the nitrate fields. It is precipitated from the nitrate liquor by means of bisulphide of soda and is drawn off in the shape of a dirty black powder. The powder is washed and filtered and then put into iron retorts and heated. It soon turns to a vapour, which being conducted into pipes of fire-clay changes as it condenses into crystals of a beautiful violet colour. These crystals are packed and shipped to Europe, all going to a London firm which has the monopoly of the iodine trade of the world.

Connected with this company are the nitrate owners of Chile who have combined into a trust which dictates just how much each factory may make every year.

The price of nitrate lands has steadily risen for years and to-day the only properties to be had outside those owned by the 79 factories now working are from the Chilean government, which sells at auction only when it is anxious to raise money. At the last auction 2,000 acres were appraised at \$3,500,000; they sold for more than their appraisement. The demand for nitrate of soda is limited, and while it is believed that the amount in sight will last the world at the present rate for 50 years and more, the Chilean government is anxious not to ruin the business by throwing more land just now upon the market.

Even after the land has been bought it costs a great deal to establish a nitrate factory. The Agua Santa establishment, for instance, has a capital of \$3,000,000 in gold. Its factory alone cost nearly \$700,000. It has buildings which cost \$200,000, and its water supply cost \$50,000. It is now employing 800 hands, to whom it pays an average of \$2,000 a day in wages, and the colonies supported by its works numbers 3,000 souls. It owns the seaport of Caleta Buena and has a railroad from its nitrate fields to the sea. It has, all told, an enormous expenditure, but notwithstanding this it pays regular dividends of 10 per cent.

Such is one of the establishments which this salty rock has built up in the desert. It amazes one to see the other factories which lie in the fields here and there, some of which are almost as large. All along the nitrate railroad in this barren valley are towns of corrugated iron, with hotels and stores, and upon the seacoast, which is if anything more barren and desert-like than the nitrate fields, there are a number of thriving cities, whose very existence is founded upon nitrate of soda.

I wish I could take the reader for a walk through one of them — through this town of Iquique, for instance. It lies on the edge of the sea under the bare ragged hills which fringe the coast. There is not a blade of grass about it and not a drop of water, save that which comes to it in ships or flows through the iron pipe lines, 75 miles long, which have been laid down to bring the springs of Pica to it. Still Iquique is next to Valparaiso the most thriving seaport of Chile. It has 30,000 inhabitants and does an enormous trade. It has wide streets, telephones, and

electric lights, and a street-car line, with Chilean girls as conductors. It has a newspaper, a theatre, and as good an English club as one will find along the west coast of South America. It has fine stores and markets, and although it produces nothing but nitrate of soda and must get everything from the outer world, one can live as well in it and have as great a variety of interest as in any place in South America. Antofagasta, although not so large as Iquique, is equally well-favoured, as are also several other ports on the desert.

CHAPTER XXI

AMONG THE CHILENOS

THE YANKEES OF SOUTH AMERICA AND THEIR COUNTRY—ODD FEATURES OF THE SLIMMEST LAND IN THE WORLD—ITS WONDERFUL RICHES—ITS VAST DEPOSITS OF GUANO, GOLD, SILVER, AND COPPER—VALPARAISO, THE NEW YORK OF THE SOUTHERN PACIFIC.

THE voyage down the coast of Chile gives one an idea of its enormous length. It is five days by steamer from the nitrates fields to Valparaiso, and the German ship on which I shall sail for Tierra del Fuego will require nine days to reach Punta Arenas, on the Strait of Magellan. Chile is like a long-drawn-out sausage or an attenuated worm. The only land that compares with it is Egypt, which drags its weary length for more than 1,000 miles between deserts along the valley of the Nile. Chile begins in a desert, and continues a desert for more than 1,000 miles. Later on, it bursts out into a green valley between high mountains, ending in the grassy islands of the southernmost part of this hemisphere. Chile is nowhere over 200 miles wide, and in some places not more than 50; but it is so long that if it were laid out upon the United States, beginning at New York, it would make a winding track across it to far beyond Salt Lake. If it could be stretched upon our country from south to north, with Tierra del Fuego at the lowermost edge of Florida, its upper provinces would be found in Hudson Bay, almost even with the top of Labrador. Its length is 2,600 miles.

Chile embraces all of the land between the tops of the Andes and the Pacific ocean south of the River Sama, which divides it from Peru, and it possesses in addition most of the islands about the Strait of Magellan. The question as to just where the boundary of Chile and the Argentine Republic lies has been one of dispute between the two countries, and although now apparently settled it is one which may bring about a war sooner or later.



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CHILEAN TYPES

Chile is a land of many climates. It is now winter on the south side of the Equator, but I found it quite warm in the north. At Valparaiso one needs an overcoat when the sun is not shining, but at the Strait of Magellan the ground is covered with snow, and during the winter months darkness comes on at four o'clock in the afternoon. In my travels in western Peru and Bolivia weeks passed without a drop of rain. It never rains in northern Chile; the cities there are as dry as the Sahara, the great question in most of them being where to get water to drink. At Mollendo, Peru, a little above the Chilean boundary the water supply comes from the Andes through an iron pipe more than 100 miles long. At Iquique, water is piped a distance of 80 miles, and Antofagasta gets its drinking water away up in the Andes, 180 miles back from the coast. The Antofagasta aqueduct is, I believe, the longest in the world. I travelled for days along its course in coming down to the sea, and on the borders of Bolivia I visited the great reservoir within a stone's throw of a dead volcano down which its mountain water flows. At many of the nitrate settlements water is bought and sold. The steam at the factories is condensed and there are engines which are used to make potable water from that of the sea.

As you sail from the desert region southward you now and then pass valleys in which a little river from the Andes has made everything green, but it is not until you reach Valparaiso that the rainfall is heavy enough to cover the whole country with verdure. Still farther south the rains increase until at a distance of 300 or 400 miles you come into a territory where the people facetiously say that it rains thirteen months every year. At Port Montt, in South Chile, the rainfall is 118 inches every twelve months, while at Valparaiso it is only 15 inches. Here, and in the northern part of the central valley, the climate is much like that of southern California. The skies are bright for at least eight months, and during the remainder of the year there are only occasional showers.

Considering Chile as a long sausage, we find it full of excellent meat. There are few countries of its size which have such natural resources. I have written of the nitrate fields, which have already netted hundreds of millions of dollars and which cannot possibly be exhausted for half a century to come. A member of the Chilean Congress tells me that there are deposits

of guano near the nitrate fields which surpass in richness the guano islands of Peru, being worth many hundred million dollars. He says this guano lies on the mainland and only a few feet below the surface.

All of North Chile, is full of minerals. In coming to Valparaiso I stopped at several ports which have copper and silver smelting works. At Antofagasta there is a smelter, said to be the largest in the world. It belongs to the Huanchaco Mining Company. When I visited it I was shown several acres covered with bricks of silver ore which had been ground to dust and so moulded that they might be the more easily smelted. At Iquique I met a New Yorker who owned valuable silver mines not far from that city. His mines are so profitable that they have rapidly made him rich; they have netted him so much that he has, it is said, laid aside £3,000,000 sterling, as a reserve fund in the Bank of England. This seemed to me a rather extravagant story, but there is no doubt that the man is very rich.

One of the chief copper ports of Chile is Coquimbo, a town of 7,000 inhabitants, situated on a beautiful bay about 190 miles north of Valparaiso. Not far from it is one of the richest copper deposits of South America. The ore is almost pure copper, and the mine owners aver that the deposit is inexhaustible. Chile has already produced nearly four billion pounds of copper. In 1896, it shipped about 50,000,000 pounds, most of which went to Europe. This, however, is not great in comparison with the United States, whose copper product during the same year was more than nine times as large. From Coquimbo they are now exporting about 1,000 tons of copper per month, and several smelters are there kept busy turning the ore into bars.

Chile has also large deposits of iron manganese, quicksilver, and lead. There are gold mines in the southern sections, and much gold-washing is now being done along the shores of Tierra del Fuego. There is also gold in the north, where a large part of the mountains have not been well prospected and where the mines have so far been worked after the most wasteful methods, so that the waste ore on the dumps could be smelted at a profit.

The Chileans, or the Chilenos, as they call themselves, are the Yankees of South America. They are by far the most progressive people on the western coast of the continent. One notices this at once on entering the country. Even the nitrate ports have a



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stirring business air about them. I found cabs at the stations ready to take me to the hotels, and I could post my letters without fearing that the mail clerks might destroy them in order to steal the stamps, as some of the clerks in the smaller post-offices of Peru and Bolivia have been charged with doing.

The Chilenos number nearly three millions. They are like the nations north of them, the descendants of Spaniards and Indians and of the union of Spaniards and Indians, but the Spaniards who came to Chile were from the Basque provinces, which have the best of the Spanish population, and the Indians of Chile at the time of the Conquest were probably the hardiest Indians on the hemisphere. It was long before they could be subdued, and their strength is still seen in the mixed race formed by their union with the Spaniards. These Indians were the Araucanians, a few of whom still live in a semi-civilized state in southern Chile, and of whom I shall have more to say farther on. To-day only about one-third of the population is pure white, the remaining two-thirds being from the cross of the Spaniards with the Indians. Notwithstanding their fewness, the whites own most of the property. They rule the country and are practically the masters of the half-breeds, who form the labouring class of the Chilenos.

Valparaiso is the chief seaport of Chile, the New York of the Pacific coast of South America, being the best business point on the west coast. It is the port nearest the capital and the great central valley of Chile, and thus forms the chief *entrepôt* of the country, having an import and export trade of more than \$100,000,000. Valparaiso has in the neighbourhood of 150,000 people, but its business is twice as large as any town of its size in the United States. It is beautifully situated, being built about a bay, the shape of a half-moon, and large enough to float the ships of the world, but not altogether safe at periods when the great storms prevail. About the bay is an amphitheatre of hills, rising almost perpendicular and forming the site of the city. The business section is at the base of the hills. It is upon ground reclaimed from the sea by walls of stone and iron railing which give the place excellent wharves.

The harbour was filled with ships when we came to anchor, and our first glimpse of the city was through a forest of smoke-stacks and masts belonging to the large and small craft in the bay. Through this forest we could see green hills covered with

houses, hills so steep that I wondered how the houses could stand upon them. The streets rise one above another in the form of terraces, and the buildings above hang out and are apparently about to fall upon those below. There is, here and there, a break or gully in the hilly walls of the amphitheatre, and at several points cable cars were seen crawling up or down the steep incline.

On landing I was surprised to find that nearly every man I addressed answered me in English. Valparaiso is more like a European port than any I have yet visited on the South American continent. Some of its business blocks remind one of Paris, its store signs bear European names, and the goods seen through plate-glass windows are as well displayed as are those of New York or Chicago. I saw many English and German women, fashionably dressed, shopping in the stores.

The streets of Valparaiso are paved with Belgian blocks. The city is lighted with electricity. It has cable connections with Europe and the United States; it has telegraph lines reaching to all parts of Chile, and long-distance telephone lines to the larger cities. The scenes on the streets are interesting. There are drays, cabs, and carriages rushing along, and among them peddlers with their stocks in panniers slung across mules. There are street cars with pretty girls as conductors, Chile being one of the few countries in the world where women collect the street-car fares. The custom originated at the time of the war with Peru, when all the men were needed for fighting. At that time the street-car conductors resigned and enlisted, and women were engaged to take their places. They did so well that the street-car companies retained them after the war was over, and they form to-day one of the pleasantest features of rapid transit in every Chilean city. The conductresses wear sailor hats, dark dresses, and white aprons, in the pockets of which they carry their money and tickets. Some of them are remarkably pretty, but it is said that the pretty ones seldom stay long. They get lovers or husbands, and give up the service. The conductresses are usually honest, but the companies have spotters, men spies who go through the cars to see that the girls make proper registration of all the fares they receive. The spies are hated by the girls, who have nicknamed them Judases.




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ISLAND OF JUAN FERNANDEZ

CHAPTER XXII

ON ROBINSON CRUSOE'S ISLAND

THE SCENE OF ALEXANDER SELKIRK'S ADVENTURES—THE ISLAND OF JUAN FERNANDEZ, AND HOW THE CHILEAN GOVERNMENT PROPOSES TO COLONIZE IT—THE GUANO ISLANDS, OUT OF WHICH PERU HAS DUG MILLIONS—WHAT GUANO IS—THE GALAPAGOS ISLANDS, AND THE ROBINSON CRUSOE OF ECUADOR.

OBINSON CRUSOE'S "Desert Island" is to be a desert island no longer. The President of Chile and a party of officials have recently explored it and the Chilean government expects to colonize it. During my stay in Valparaiso I learned much of the condition of the island from members of the President's party, and it is from photographs made by them that the illustrations of this chapter are taken.

The island is, as is known, that of Juan Fernandez, lying about 600 miles west of Valparaiso. It is now about 200 years since Alexander Selkirk, the sailing-master of an English vessel of ninety tons, was placed upon it. Selkirk had fallen out with the captain and headed a mutiny, the result of which was that he had the choice of being hanged at the yardarm or left on the island of Juan Fernandez. He accepted the latter alternative and with a small supply of provisions was landed in what is now called Cumberland Bay. This was in September, 1703. He lived there four years and four months, when an English privateer, attracted by his watch-fires, called at the island and conveyed him to England.

During his stay, Selkirk had many of the adventures described in Defoe's tale of "Robinson Crusoe," although Defoe, having a better knowledge of the islands north of Brazil, in the Caribbean sea, has made much of his story correspond to them in its descriptions of scenery, products, and climate. The outline of

Defoe's story was, however, suggested by Selkirk's adventures, and one can almost trace poor Crusoe's wanderings in his life on Juan Fernandez. In the first place, the terrors which assailed Selkirk, when he found himself alone on the island, were the same as those of Crusoe. He wished for a time that he had chosen to be hanged rather than have come ashore. Later on he found an Indian who had been lost in the woods, having landed with a party which Selkirk did not see. This Indian he adopted, and his story concerning him was the foundation of Robinson Crusoe's man Friday. You remember the nursery rhyme which depicts how Robinson Crusoe was dressed:

"Poor old Robinson Crusoe! Poor old Robinson Crusoe!
He made him a coat of an old nanny goat!
I wonder how he could do so."

When Selkirk was found, according to the narrative of Captain Rodgers, who took him to England, "he was clad in goat-skins and was running about as though he were demented." He had built a fire on a rock, now known as "Robinson Crusoe's Look-out," and had in this way attracted the ship's attention. This lookout is on an immense hill, which rises almost perpendicularly from the shore and the top of which can be seen miles off at sea.

When Selkirk arrived in London he became the talk of the town. He was discussed at the clubs and coffee-houses, and Sir Richard Steele wrote a paper describing his adventures. In this he told how Selkirk, on first landing in England, seemed to have become eccentric and odd through his solitude, but how, later on, this eccentricity wore off. Selkirk himself published a small pamphlet of twelve pages describing his wanderings.

The bulk of "Robinson Crusoe," however, came from the brain of Daniel Defoe. It was his genius that made it the greatest story of adventure the world has ever known. It was written in London and was first published 180 years ago. A copy of the first unabridged and original edition is to be seen in a glass-case in the library of the British Museum. Later editions have been considerably altered, and it is said there are few books



COAST SCENE, JUAN FERNANDEZ

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which have been so mutilated by the printers. It is now to be read in almost every known language, having been translated into Spanish, German, Italian, Russian, Greek, and Arabic. When I was in China, a few years ago, I was told that in a Chinese edition it was exciting the minds of the youthful Celestials.

The Island of Juan Fernandez is a great mass of rock, twelve miles long by seven miles wide, which rises in places almost abruptly from the sea. It is made up of mountains, valleys, and ravines. Its northern half is covered with dense vegetation, but on the south it is as bare and bleak as the Peruvian desert. The best landing-place is at Cumberland Bay, where there is a fishing settlement which includes most of the people on the island, numbering all told not more than fifteen. Back of the settlement are some straw huts which were once occupied by agriculturists and stock-raisers. The huts are made of cane and wattled straw. The farming and stock-raising did not pay, and to-day the only animals on the island are wild goats and mules.

The new colony is to be established on the northern part of Juan Fernandez, where the soil is rich. The hills are covered with wild oats, and every open spot has a covering of good grass. There are fruit trees, the product of some planted by Selkirk 200 years ago; there are also wild fruits, and grapes as delicious as those which Robinson Crusoe dried for raisins. Pears, peaches, and quinces are to be found, growing wild, and vegetables escaped from cultivation.

There are many caves on Juan Fernandez, in some of which, it is said, Alexander Selkirk lived. One is in a ridge of volcanic rock. It is as large as the average parlour, with a roof fifteen feet above the floor. The entrance to it is sixteen feet in height, the cave extending inward about thirty feet. In the walls are little holes or pockets such as Robinson Crusoe describes in his cave home, and here and there are rusty nails, hammered into the rock, it is stated, by buccaneers who used the cave when the island was one of their favourite resorts. Other caves are covered with ferns, which grow so luxuriantly that it is easy to imagine that Selkirk planted the hedges there to hide his home from view.

There is a monument to Selkirk on Juan Fernandez. It is a marble tablet set in the rocks at Robinson Crusoe's Lookout by

The guano islands are masses of volcanic rock which rise up out of the ocean in a region where it never rains. The result is they have not a blade of grass or any green thing upon them. They are merely islands of dry rock, which for some reason the pelicans, sea gulls, and other birds which feed by the millions along the shores of the South Pacific ocean have chosen as their nightly roosting-places. Night after night for ages the birds have come to rest upon them, disregarding other islands near by, which to all appearances are quite as desirable. The rocks of the islands are covered with a gray deposit. This is the guano, which is chiefly the manure of birds, although it has mixed with it other things, such as seals, which when alive climbed upon the rocks to die. Thousands of seal-skins have been found in the guano, 500 tons of such skins were, I was told, recently excavated from one spot.

The guano-making birds are of many kinds, the most important being the pelican. The latter fly about the islands in such flocks that they sometimes darken the face of the ocean. They feed upon fish, and a flock of pelicans is a sign that there is a school of fish near by. They scoop up the fish with their bills into the pouches under their necks. They are the gluttons of the sea, and at times so gorge themselves that they cannot rise from the water, but must rest there until enough of their food has been digested to lighten their weight. I saw millions of pelicans on the Lobos islands. They are sociable birds and hunt in flocks, showing no sign of fear of human beings, and one can go up on the islands and approach them without disturbing them.

The guano of the Lobos islands is found in pockets covered with layers of sand, which vary in thickness from two to fifteen feet. The sand is shovelled off and the guano taken out. As it is dug into, so strong a smell of ammonia arises that the men wear iron masks over their faces to keep the ammonia dust out of their mouths, noses, and lungs. The guano looks like fine sand, which is first loaded on trucks and carried on a tramway to the shore, where it is transferred to the ships, to be taken to Europe or America. After a few days at sea the odour disappears. The ammonia of the upper crust passes off, and the filthiness of the cargo is not detected until one goes into the hold. Guano is not worth so much now as it was years ago. Other fertilizers have taken its place, and its price is less than half what it once was.

There have been times when it brought \$100 a ton. To-day it can be bought, I am told, for \$30 to \$40 a ton.

The first guano shipment to Europe was made more than fifty years ago. At that time twenty barrels of it were taken to Liverpool and used on a farm near the city. The result was that orders were sent back for more, and soon hundreds of ships were engaged in carrying guano to Europe. Often 200 vessels could be counted at the different islands at one time. Chinese coolies were imported to get the guano out. Usually they were horribly treated, and to-day it is not uncommon to find dead Chinamen mixed with the new deposits. For a long time the guano islands provided the Peruvian government with a revenue of \$15,000,000 a year. Now they are practically exhausted, and Peru, having lost its income from the nitrate fields as well, has fallen from wealth to poverty.



THE ALAMEDO (PUBLIC WALK) SANTIAGO



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ARCADE IN SANTIAGO, CHILE

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CHAPTER XXIII

THE CITY OF SANTIAGO

SPECIAL FEATURES OF LIFE AND BUSINESS IN THE CHILEAN CAPITAL—A BIRD'S-EYE VIEW FROM SANTA LUCIA—PALACES THAT COVER ACRES AND COST FORTUNES—A STREET-CAR RIDE FOR A CENT—HIGH LIFE AMONG THE CHILENOS—PARIS DRESSES AND DIAMONDS—HOW THE NABOBS ENJOY THEMSELVES—SCENES AT THE OPERA AND THE RACES.

THE capital of Chile in many respects compares favorably with the United States national capital. Santiago is of about the same size as the city of Washington, and is situated a like distance from the ocean; it is six hours distant by rail from Valparaiso. The way is over the Coast Range of the Andes, and the express trains have cars like those on the roads between New York and Washington.

Our national capital is washed by the Potomac; Santiago has its river Mapocho, which cuts the city in two. We have our Capitol Hill, and Santiago has its Santa Lucia. Santa Lucia lies in the midst of the city; it is a mass of volcanic rock, three-fifths as high as the Washington Monument. It has a base of an acre and rises precipitously above all the buildings, so that at its top one is far above the spires of the cathedrals and churches. In the rocks green mosses, flowers, bushes, and curious plants are growing. Out of them rise eucalyptus trees; from their sides gigantic ferns reach out so that the hill seems a very garden in the air, almost as wonderful, if not so extensive, as the Hanging Gardens of Babylon.

The best view of Santiago is from Santa Lucia. Let us look at it together. The way to the summit winds about through one wonderful rock formation after another. We go past beautiful grottoes and cozy nooks and finally stand upon the peak with all Santiago below us. On this spot we are above a vast expanse of square ridges of terra cotta tiles, out of which, here and there,

rise trees and a wealth of green. The ridges are the roofs of the Santiago houses, which are built about *patios* and courts, the only gardens of the people.

From the hill we see that most of the buildings are of one or two stories. They are close to the streets, which cross one another almost at right angles, the city being divided in two by the wide Alameda. The Alameda is the Pennsylvania Avenue, the Champs Élysée, the Unter den Linden of Santiago. It is twice as wide as Pennsylvania Avenue, Washington, and it runs the full length of the city. It has a roadway on either side and in the middle, bordered by gurgling streams of the clearest mountain water, are rows of great poplar trees which furnish an arbour of dense shade extending from one end of Santiago to the other. In this arbour are the statues of many of Chile's heroes, and at every few feet throughout its full length are stone seats upon which people rest after their promenade. Other green spots in the plain of terra-cotta roofs are the parks of Cousiño and the Quinta Normal, or Agricultural College, the Hipico race course, and the new avenue which has recently been laid out along the river Mapocho. The Mapocho is one of Santiago's characteristic features. It is 130 feet wide and runs through the city for about two miles. This part of its bed has been paved with stone and the banks are massive stone walls, along which shade trees have been planted.

But let us go down from Santa Lucia and ride through Santiago on the top of a street-car. There is no better way of seeing the city than this, and none quite so cheap. The car-fares here are the cheapest in the world, the roof seats costing only about one cent of our money. It is worth more than that to look at the pretty girl conductor, who smiles as she puts our fare into her white apron pocket. As we board the car we notice that the streets are well paved with Belgian blocks. They are rather narrow, however, and the big ox carts, which are the drays and freight waggons in Chile, are crowded almost to the walls of the houses as we go whizzing by.

How large the houses are and how low. Many of them cover acres; though few are of more than two stories, and many are only of one. In the best parts of the city the houses have Greek fronts. They are all of brick, plastered smooth with yellow or white stucco. Their doors are upheld by columns of stucco, and

I am certain that there are more Corinthian columns in Santiago to-day than in Athens.

Some of the residences are like Italian palaces, and homes, which have cost \$100,000 and upwards, are many. I doubt if there is a capital of its size in the world that spends so much money; one has only to look at the well-dressed people on the streets, and at the fine turnouts which pass our tram as we ride through the Alameda, to see that Santiago is a very rich city. The business streets have as fine stores as have any of the European capitals. The costliest of diamonds sparkle in the jewellers' windows and the finest of all kinds of goods are in demand. The shop windows are tastefully dressed, especially in the many great arcades, roofed with glass, which are cut through a number of the larger business blocks from one side to the other.

The Plaza des Armes, where the car stops, is the ganglionic centre of the Chilean capital. About it are the chief business streets; on one corner is the cathedral, on another the post-office, and all around are portales or corridors filled with booths and walled at the back with fine shops. The plaza itself is a beautiful little park containing several fountains, palm trees, and many tropical plants and flowers. It is surrounded by a hexagonal walk or promenade sixty feet wide made of tiles which are as beautifully laid as is the tiled floor of a Washington vestibule.

Let us enter the portales and watch the people buying and selling. We are in one of the oldest sections of Santiago, a section which was in existence more than two centuries before the city of Washington had its birth. The portales have stores like those of the old cities of Spain; they are different from the modern shops on the other side of the Plaza; they are merely caves in the walls, the floors being covered with piles of goods so arranged that it is easy for the purchasers to handle them. Some of the merchants stack up their best cloths in the doorways and upon the pavement outside. Scores of women are moving through the portales. Many are shopping, and we notice that the desire for a good bargain is quite as keen as at home. Most of the women wear black gowns and black mantas. The younger girls drape their mantas coquettishly around their heads so that they form a sort of a bonnet, showing only the face. They look quaintly

pretty and are noted for their beauty. They are tall, slender, and well-formed. They are not as dark as the girls of Peru, and they are more stylish and appear to have more intelligence than the girls farther north.

But let us look at the stores. We see that some have their goods marked and that among the lower-priced figures on pieces of cloth are \$1, \$2, and \$3 per yard. Across the way is a store where silk hats are labelled \$25 a piece, and next door ladies' shoes are selling for \$10 and \$15 a pair. These prices however are in Chilean money, which is worth just about one-third as much as ours, so that the real cost of the goods is about the same as in the United States. All imported articles are high: for instance, one of the Santiago ladies told me that she pays \$30 a pair for American shoes: she added that her imported bonnets cost her \$50 a piece. At my hotel I have a fairly good room for \$8 per day, the charge including two meals. It is the same in the restaurants and, indeed, everywhere. About the only things that are especially cheap are the street-car fares and cab rides. The cab fares are only seven cents of our money a trip, and the hour rate is usually not more than thirty-five cents.

I wish I could take the reader into some of the more pretentious houses of Santiago and show him how the rich Chilenos live. Every one here is now talking of hard times, and I am told that many of the supposedly wealthy people are overloaded with mortgages. However that may be, they spend enormous sums of money and live like princes. I have been in Santiago houses which have upwards of fifty rooms, and which are furnished as expensively as some of the palaces of Europe. Many of them have their billiard rooms and ball rooms. They contain fine paintings, statues, and elegant furnishings. The curtains in one palace on the Alameda cost \$200,000; another house is a reproduction of the Alhambra in Spain, and a third, situated in a garden of five acres, has a series of beautiful halls, ending in a Moorish bath-room, with a marble pool in the centre of the floor. These great houses are commonly of one or two stories, the rooms running around *patios* or gardens. They have ceilings frequently fifteen or sixteen feet high, and are furnished more with regard to striking effect than to comfort. Much of the furniture is plated with gold leaf, and the general style of the hangings is French.



VEGETABLE-SELLER, SANTIAGO, CHILE

There are no fireplaces in the Chilean houses. There are no stoves or chimneys with which they could be connected if so desired. Though Santiago has a temperate climate, it is sometimes as cold as Atlanta, Georgia, in winter, and I am writing in my room at the hotel with my feet in a fur bag and a poncho over my shoulders. Chilean gentlemen keep on their overcoats and the ladies their furs in the parlours, and it is not an uncommon thing for men to wear their overcoats above their dress suits when at dinner.

The meals of a Chilean family of the wealthy classes are different from ours. No one comes down stairs for his first breakfast; it is served in the bed room, and usually eaten in bed. It is merely coffee and rolls, without butter or jam. The meal is called "desayuno." I pay forty cents a day extra for this meal at my hotel. Breakfast, or "almuerzo," is partaken at eleven or twelve o'clock. It consists of a soup, some fish and meat, with perhaps a pancake at the close. As a rule, wine is taken at breakfast, with a small cup of coffee after it. At seven or eight in the evening comes dinner. This is much like the breakfast, only more elaborate. There are always wines on the table, and there are many courses served separately. There are soup, fish, entrées, roasts, game, and salads, ending with a dessert. I have never dined more generously than in Chile, and have never visited a country where the hotels were so uniformly good.

But to return to the butterflies of Chile,—for the lives of many of the rich people here are almost as idle as that of the butterfly,—they rise at about eight o'clock or later. From the time they get up until breakfast the hours are spent in walking or driving and to some extent in attending to business. After breakfast they rest and between three and six p.m. they are ready to receive or make calls. At six o'clock every person of note who owns a carriage goes to the Cousiño Park. All are dressed in their best, the men wearing silk hats, frock coats, and well-cut suits, and the women having on Paris-made gowns and bonnets. In the park they parade their carriages up and down the principal drives and stare at one another. After about thirty minutes, by a sort of common consent, they all make for the Alameda, where they form a procession of carriages three or four abreast and drive up and down for a distance of about four blocks, still staring at one another. The driving is superintended

by mounted policemen and the scene is imposing, although rather stilted and fantastic to the eyes of a stranger. The vehicles are of all kinds. There are drags, victorias, landaus, and four-in-hands; some are driven by their owners and some by coachmen in gorgeous liveries. The parade continues for perhaps half an hour, during which time no one speaks to another, but merely bows to his friends. After the parade all go home to dinner, some one carriage breaking the line and the others following suit on the trot.

After dinner the nabobs of Santiago go to the opera. The municipal theatre here is one of the largest opera houses on the Continent. It is subsidized by government, and has an annual season of Italian opera, the companies being brought from Italy. The season lasts for eighty nights and during its progress nearly every person of note has his box, which costs him a sum equal to about \$400 of our money. Each box will hold six people. Usually all the boxes are taken, although two of the galleries of the large hall are divided up into boxes.

At the Santiago opera both sexes always appear in full dress, the ladies usually being resplendent with diamonds. The people pay but little attention to the music, devoting most of their time to looking at one another. In order that they may do this the better the lights are never turned down. Ladies take their hats off when they enter the boxes and the men bare their heads during the acting, but as soon as the curtain goes down every man puts on his hat. Between the acts both ladies and gentlemen go out to promenade in the lobbies, where there are restaurants at which the ladies can have ices and the gentlemen, if they wish, can have other kinds of refreshments. All varieties of liquors are sold, and one can have anything from a bottle of champagne to a special variety of cocktail, which was introduced into Chile by a former United States secretary of legation. It is, indeed, the one thing American that now holds and will always hold its own in Chile. During the intermissions visiting goes on among friends in the boxes, and the opera is thus more a social function than a musical one.

The Chilenos do not have as intimate a social intercourse as we have. Women are by no means so forward, and I have yet to hear of women's clubs in Chile. The people are fond of dancing and the President often closes one of his large recep-

tions with dancing. At such times the display of diamonds is magnificent. Quarts of precious stones are dragged out of the vaults, and their brilliance vies with that of the electric lights. At a recent reception one lady wore eight diamond stars and another a large bouquet of diamonds. There were chokers of diamonds, buckles of diamonds, and in fact almost every variety of diamond ornament that one can imagine. No one wore such common things as roses, although one or two ladies had bouquets of orchids so rare that in New York they would have cost as much as the jewels.

Among the social features of life in Santiago are the horse races, which are held regularly every Sunday afternoon during the season under the auspices of the Club Hipico. This is the event of the week. The men go dressed in tall hats, black frock coats, light pantaloons, and white kid gloves. The women put on their handsomest street gowns and the "four hundred" of the upper crust call upon one another between the heats. All bet more or less, and at times the scene is an exciting one.




INTERIOR OF SANTIAGO CATHEDRAL

CHAPTER XXIV

THE PRESIDENT OF CHILE

A VISIT TO THE CHILEAN "WHITE HOUSE"—THE PRESIDENT AND CONGRESS—
HOW CHILE IS GOVERNED—THE INFLUENCE OF THE CHURCH AND ITS
GREAT WEALTH—ITS VAST ECCLESIASTICAL PROPERTY IN SANTIAGO AND
ITS RICH NUNS AND MONKS—EDUCATION IN CHILE AND THE AMERICAN
SCHOOLS.

URING my stay in Santiago I had an interview with the President of Chile. His Excellency gave me an appointment and it was with our American Minister that I chatted with him concerning matters of mutual interest to our respective countries. The audience was held at "the Moneda," or Presidential residence, a three-story building so vast that you could put the White House into one corner of it. Its ground floor is, I judge, as large as that of the Capitol at Washington. The building is constructed in Spanish style, with many rooms built about hollow squares, filled with flowers and trees, and in some of which fountains play. The Moneda contains not only the private apartments and offices of the President, but also the offices of several of his Ministers. It is one of the busiest places in Santiago, and its surroundings are quite imposing. The Chilean officials are fond of pomp and display. As we entered the Moneda we passed soldiers with drawn swords in their hands, and just outside were ranged the President's military guard, of 200 cavalry, ready to accompany His Excellency on a drive he was about to take after my audience was over.

We went through long halls to the offices of the Secretary of State, who took us in and introduced us to His Excellency, President Errazuriz, who received us cordially and through an interpreter talked with us for about an hour. The President of Chile is a slender, courtly man of perhaps forty years of age. He has a dark, handsome face and a dignified manner. He is very enthusiastic about the prospective development of Chile, and a large

part of our conversation was about the proposed Isthmian Canals and the possibility of an Inter-Continental railroad. He had many friendly words for Americans and American capitalists, and advocated closer social and financial relations between the United States and Chile.

During this interview and others which I have had with the leading men of the government, I asked many questions as to the political condition of the country. Though a Republic, it differs in many respects from that of the United States. The Chilean President, for instance, is elected for five years instead of four, as with us, and is not eligible for a second term.

The Presidential election day is June 25, of the fifth year of each presidency, and Inauguration Day is September 18, of the same year. The 18th day of September is the Chilean day of Independence, corresponding to our 4th of July. The President of Chile receives a salary of \$18,000, and has in addition an allowance of \$12,000 annually for expenses. These sums, being in Chilean money, are equivalent to not more than \$11,000 in American gold. The President has the veto power, as our President



PRESIDENT ERRAZURIZ OF CHILE

has, but his veto can be over-ridden by a two-thirds' majority of the Members of Congress present at the time the measure is brought back; and the political situation is such that, when a Presidential measure fails, it is usually the custom for the Cabinet to resign, so that Chile has a new Ministry on an average of once a month or so. In addition to the Cabinet, which is made up of ministers much on the same lines as those of our own Cabinet, the President has a Council of State, consisting of five members appointed by himself and six chosen by Congress.

The Chilenos, if unmarried, cannot vote until they are twenty-five years of age, though married men can vote at twenty-one. Members of the House of Deputies, which corresponds to our House of Representatives, must have an income of \$500 (£100) a year, and Senators must have incomes of £400, or \$2,000 a year. Congress sits in regular session from June 1 until September 1, but the President may call an extra session when he chooses. Congress is housed in the finest building in Santiago. It covers a whole square, and looks not unlike some of our public buildings at Washington, save that it is built of brick covered with stucco of a terra-cotta colour. The sessions of Congress are often stormy. The Chilenos are fond of politics, and usually one hears more political talk in a day in Santiago than in a week in Washington.

There are frequent ups and downs in political life. New cabinet ministers are chosen upon slight provocation, while other officials are also frequently changed. The country is divided up into provinces presided over by *intendentes*, and the provinces are divided into departments ruled by governors. A department consists of one or more municipal districts, each of which has a council elected by popular vote.

Most of the officials are appointed by the President, and the country is to a large extent ruled by him and his ring. The masses of the people have little to say as to the manner of government, about two hundred families or so controlling everything. There are, however, two great political parties, the Conservatives and the Liberals. The Conservatives are the more compact, but the Liberals are more numerous. The latter are the progressive party, advocating popular education, the elevation of the masses, and everything modern. The Conservatives are more

than their name implies, and they include among them the clerical or church element, which in Chile has enormous influence.

The Chilenos are satisfied with Catholicism, though the educated Chilean man does not like to have the Church meddle with political matters. He does not go to church save on Sundays and feast days, and, like many men outside South America, leaves most of the church exercises to his wife and daughters. The women of Chile are the strongest upholders of Catholicism and its influence. They are very devout.

You see them in the churches on week days and on Sundays kneeling on the stone floors, saying their prayers. You meet them on the streets going to confession or mass, each carrying a prayer rug in one hand and a prayer book in the other, and if you enter the churches, you may, perhaps, see a pretty devotee, who will look at you out of the tail of her eye as she mumbles her prayers, with a cross old duenna in the background. As in Peru and Bolivia, the women of Chile wear solid



ARCHBISHOP OF SANTIAGO

black when they go to Church. They cover their heads with black mantas, so that a church congregation makes you think of

a nunnery, with all of the nuns clad in black. Indeed, to wear white at such times is a sign of grief and shame, rather than of purity and joy. It is the custom for women who have done wrong to put on white clothes and to shroud their heads in white shawls as a sign of penitence and of a resolution to be good for the future.

The Catholic Church of Chile is enormously wealthy. Its property in Santiago alone is said to be worth more than \$100,000,000 in gold. It owns some of the best business blocks in the city. The whole of one side of the Plaza, which is the centre as well as the most valuable of Santiago business property, is taken up by the palace of the archbishop and the cathedral, and there is other property in the neighbourhood which belongs to the Church. It has acres of stores, thousands of rented houses, and vast haciendas, upon which wine and other products are manufactured and offered for sale. Nearly all is controlled by the archbishop, although much of the Church property is held by its different organizations.

The Carmelite nuns of Santiago are the richest body of women in South America, if not in the world. They have whole streets of rented houses near their nunnery, and also own large farms, which bring them in a steady income. These nuns never allow their faces to be seen by men, and if for any reason men must be employed in the nunnery, for the work of repairs, etc., the nuns shroud their forms and heads in thick black cloth for the time being. Of course no man is admitted to the convent proper, but through a friend, who has influence with them, I was shown the beautiful chapel which they have established for the use of their employees and outsiders. In obtaining permission my friend and I talked with the nuns, though we did not see them. Our speaking-tube was a dumb-waiter and the voice which came down to us was singularly sweet; as I heard its tones, of musical Spanish, it seemed to me a shame that it should, as is the rule in the establishment, be confined to a whisper.

The Dominican Friars also own millions of dollars' worth of property in Santiago. I walked past blocks of houses, every one of which, I was told, belongs to them and pays them rent monthly. The Dominicans dress in black hats and gowns, with soft white flannel undergowns; they look quite imposing as they file along the streets. Their Church is perhaps the finest in Santiago. It

is cathedral-like in size and appearance, and its altar is one of the most beautiful on the Western Hemisphere.

Santiago is a city of schools as well as of churches. The schools are of different kinds, from the University of Santiago, which has more than 1,000 students, down to the public primary schools, which are found all over the country, and are attended by more than 114,000 youthful Chilenos. This is, however, less than one-fifth of the children of school age, so that four out of every five remain at home. The National University has branches of law and medicine, as well as the ordinary collegiate departments. No tuition is charged, for the professors are paid by the State.

Chile is proud of her educational system and is doing all she can to extend it. She spends millions of dollars upon it every year. There are public schools now in all the towns and the larger places have *liceos*, or high schools, of which there are twenty-five in the country. There are two lycees for girls in Santiago maintained by the government. The national institute, or high school of Santiago, has more than 1,000 pupils; while the private schools and colleges have an average attendance of 18,000 pupils.

There are two American schools in Santiago, one for girls and another for boys. The girls' school—I should say the girls' college, for it is as good a college as one will find almost anywhere—has been in operation for years, and it has a great reputation in Chile. It is under the direction of an American, and has a corps of American girls as teachers. It has several hundred students, among whom are the daughters of many of the best Chilean families. This school is connected with the Methodist Episcopal Church, although religious instruction forms no obligatory part of its tuition. The boys' school is under the control of the American Presbyterian Church. It is called the Instituto Inglese, and it proposes to give Chilean boys an academic and collegiate education. It has handsome buildings and grounds and is fairly well attended.

Chile has also its normal and military schools. It has an agricultural college and an experimental farm. It has a fish commission and a weather bureau, the latter furnishing forecasts of the weather, just as our bureau furnishes at Washington. The telegraph lines are owned by the Government, and one can send

a ten-word message to any part of the country for about seven cents of our money. There are now in use about 9,000 miles of wire, and all the large cities can be reached by telegraph.

The postal service is good. More than 60,000,000 letters and newspapers are sent through the mails every year, and the mails on the whole are safe. Girls are employed as postal clerks, and when I register my letters for the United States it is a Chilean maiden who affixes the stamps and gives me the registry receipt. She charges me a sum equal to three and one-half of our cents for doing so, or less than it costs one to send letters from the United States to Chile.




ROUND-UP OF CATTLE

CHAPTER XXV

FARMING ON A GRAND SCALE

A LAND WHERE A THOUSAND ACRES ARE ONLY A GARDEN-PATCH AND MANY FARMS ARE WORTH MILLIONS—SPECIAL FEATURES OF LIFE ON THE HACIENDAS—PEONS WHO WORK FOR TWENTY CENTS A DAY AND GET DRUNK EVERY WEEK—THEIR EXTRAORDINARY STRENGTH, AND THE GREAT MORTALITY AMONG THEM—A VISIT TO AN IMMENSE ESTATE MANAGED BY A WOMAN—THE WHEAT LANDS OF CHILE—ITS FINE CATTLE AND HORSES.

HE Chilean farmers are perhaps the richest of their class in the world. They live like feudal lords on their great estates, often numbering their retainers by the hundred, and massing their cowboys like an army at the annual round-ups. They have great flocks of sheep, vast droves of cattle, and the finest horses on the west coast of South America. They raise every year more than 28,000,000 bushels of wheat, quantities of excellent wine, and export all kinds of fruits and vegetables to the desert lands farther north.

Agriculture is, in fact, the chief business of Chile. Fully one-half the people are engaged in it, but only the nabobs are the landowners. In the whole United States, with its seventy-five million inhabitants, there are only 31,000 persons who individually own 1,000 acres or over. Here a thousand-acre farm is a garden-patch. I meet daily, men who have 10, 20, and even 30,000 acres of land, and I have visited several estates each worth more than \$1,000,000. I have a geographical text-book of Chile, just published, which gives the government valuations of the farms of each province. There are hundreds in every State assessed at more than \$100,000, and in all Chile there are scores valued at \$1,000,000 and upwards.

I am writing this chapter at the little railroad town of San Rosendo, about 1,200 miles south of the Peruvian frontier, and 300 miles south of Santiago, in the great central valley of Chile. The valley is from 20 to 100 miles wide, and about 600 miles

long. It extends from above Santiago to hundreds of miles south of it. On the east of it are the snowy walls of the Andes, with here and there the cone of a dead volcano rising above the other peaks, and on the west the lower mountains and hills of the coast range, their sides covered with green. Between these almost parallel but winding walls lies some of the best soil of South America. The valley is cut by many creeks and small rivers, which, fed by the Andean snows, carry with them to the sea loads of silt so rich that it makes fat every inch of soil upon which it drops.

In some streams, such as the Mapo, the amount of silt is so great that it coats the lands, by the aid of irrigation canals, to the depth of an inch per year. Other streams, such as the Biobio and some streams of southern Chile, are almost as clear as crystal. The whole of the valley north of this point is irrigated, and the country is like a vast garden, made up of fields divided by canals along which hedges of Lombardy poplars have grown up to the height of sixty feet and more.

Some of the estates are walled with stone, and it is only occasionally that you see fences of wire or boards. There are no barns standing out on the landscape; the only buildings are the great low, rambling structures of the owners and the mean, squalid houses of the labourers. The latter I shall describe more fully farther on. Oxen everywhere take the place of horses or mules. Clumsy carts drawn by these beasts, with yokes tied to their horns, are the farm waggons, and the ploughs are forced through the furrow by the same motive power.

The estates are as a rule well kept. I passed vast vineyards, the vines of which, now covered with the red leaves of winter, spotted the landscape with fields of blood. The vines are dwarfed as they are in France, and in many cases are trained upon wires. They are planted in rows about five feet apart, and oxen are used to plough them. The Chilean wines, both white and red, are excellent, and the amount exported every year is constantly increasing. The climate of Chile is similar to that of California. The same crops and fruits are raised in both places and the conditions of successful farming are alike, save that in California one finds most of the farms very small.

What would one of the California women who tells you that 40 acres are more than enough for one person to take care of,



ARRIVAL OF VISITORS AT A FARM: "EVERY CHILD HAS HIS PONY"



OWNER AND CHIEFS OF HACIENDO

think if she were asked to manage a farm worth \$1,000,000 and comprising more than 11,000 acres? There is a woman who owns an estate of this size near Santiago. She directs it herself, and this notwithstanding that she is now considerably over three score and ten. She keeps her own books and at the same time manages all the details connected with her household and its numerous inmates. This woman is one of the remarkable characters of Chile. Her name is Señora Emilia Herrera de Toro. She belongs to one of the oldest families of Chile, and the estate has been in her family for hundreds of years. It lies within two hours by rail of Santiago, and, as is the case with most of the wealthy farmers of the country, the family live upon it during the summer months only, spending the winter in their home at the capital. It was in company with our American Minister and his wife that I visited Madame de Toro and thereby had one of the most pleasant and interesting experiences of my stay in Chile.

Leaving Santiago, on the train we rode under the snow walls of the Andes, through hacienda after hacienda, by vast vineyards of blood-red vines, by walled fields filled with herds of cattle and sheep, until we came to the station of the "Aguila" estate. Here we were met by a spanking team of bays and driven for a mile or so over the estate before we came to the home. This consisted of many long, low, one-story buildings, with roofs of red tiles and wide porches floored with brick, running about *patios* and gardens. A grove of trees, at least 100 feet high, looked down upon it, and the long leaves of a great palm rustled a welcome as we stepped upon the porch. There were, I judge, 100 large rooms in the house, and all on the ground floor. The furnishings were more with regard to comfort than to the show which one sees in all the Chilean city homes. We were made to feel that we were in "Liberty Hall," and free to go and come as we pleased. There were about thirty children and grandchildren of Madame de Toro visiting her, as well as several other guests. We were duly introduced, and later in the day drove over the great farm in quite royal style with Señor Santiago de Toro, who, under his mother, is chief manager of the estate.

Our carriage was a three-seated drag, which once belonged to King Louis Philippe, the mate to which is now the property of the English royal family and is kept in the Windsor stables.

Señor de Toro bought the vehicle in Paris after the deposition of Louis Philippe, and it has been so carefully kept that it looks as well to-day as when a king was its owner. We had six horses, managed by three postillions and outriders in livery, and thus drove for mile after mile through wide avenues of Lombardy poplars, by the two lakes which supply the family with fish, frightening the ducks and swans which were there floating, on to the rose garden, which contained more than a hundred varieties of roses, past meadows where great flocks of sheep were grazing, and by many irrigated fields being made ready for next year's crops. Here was a forest of eucalyptus trees planted for their lumber, there an orange grove, the trees still bearing their yellow fruit, and farther on a vineyard. Most of the fields were surrounded by well-made stone walls, and every part of the estate seemed carefully and economically managed. I noticed in one place a Chicago windmill, and Señor de Toro told me that he used American ploughs and other American machinery.

The estate is to a large extent a dairy farm. It has about 2,000 cattle, and 300 milch cows, from which come something like \$6,000 worth of milk and \$8,000 worth of butter annually. Upon it are also 200 horses, although all the farm work is done by oxen, which are the only draught and farm animals of Chile. The horses are kept chiefly for breeding, and for the use of the family and guests. It is necessary to have a large number of horses, for parties of fifteen or twenty often want to go horseback riding at the same time, and the Aguila estate is managed more for the comfort of the family than for profit, although it is, for all that, a very profitable farm.

Madame Emilia is fond of giving presents. She has one man busy all the year round making baskets to be used in sending gifts to her friends, or filled with fruit to be given to guests when they take their leave. She raises for sale 500,000 oranges a year, but 50,000 are always left on the trees for home use. All of the mutton eaten on the estate is home-raised, and the 800 sheep reared on the farm are chiefly for the use of the owner and her friends. She also raises great quantities of onions, squashes, and other vegetables to give away, and sends them to the Santiago hospitals by the cart-load. I saw piles of such vegetables stacked up for this purpose at the rear of the house. There was enough, it seemed to me, to feed a good-sized American

town for a year. Mountains of pumpkins, great piles of squashes, bags of walnuts, and cart-loads of corn all awaited shipment as gifts. The owner delights in the old way of doing things, and the table is chiefly supplied from the estate, the ice-cream being made by snow brought from the mountains in bags on the backs of the peons. As it takes several days to make the journey, the ice could be more cheaply procured by train from Santiago; but she prefers the old way rather than the new, and the estate is kept as much as possible as it was in the days of her girlhood. Each of her many grandchildren has his own pony, and I saw little boys and girls between the ages of four and fourteen galloping about the place and holding their seats like grown men and women.

The meals served to guests on such an estate are of course excellent. You get up when you feel like it and have your coffee or tea and toast in your room. At eleven or twelve o'clock all the household meet at breakfast. This is what would be called a course dinner, beginning with soup and ending with coffee. Then at seven o'clock there is dinner, with perhaps a lunch or tea at four o'clock, and supper late in the evening. The better class of Chilean families keep very late hours, and there are usually some at Aguila who stay up chatting till long after midnight.

During my stay at Santiago I paid a visit to the famous estate of the late Madame Cousiño, known as Macul. Her name will doubtless be familiar to many of my readers, since she has been much written of in the newspapers as the richest woman in the world, the Chilean woman who possesses millions of acres of land, mines of copper, silver and coal, towns and factories, and an income of millions a year. Madame Cousiño was very rich, but there are to-day women in Chile who are richer than she ever was. She was however a lavish spender, and her estate, which is now being settled up, will not aggregate, I am told, \$10,000,000. She was, nevertheless, a remarkable woman and fond of all things modern.

Macul contains about 5,000 acres and cost when Señor Cousiño bought it \$600,000. I venture to say that more than that amount has been spent upon it, and it is now valued at over \$1,000,000. It has 100 of the finest of blood horses, the choicest of sheep, and 200 of the best of cattle, bred from imported Durham stock.

It has a vineyard which contains several hundred thousand vines, and produces millions of bottles of wine annually. American ploughs and other machinery are used upon it, and it takes a regiment of peons to do the work. The estate is kept like a prize farm, and lines of tall poplars mark out the courses of the irrigation ditches. The water-rents for Macul cost about \$5,000 a year. The ground is very rich and all things grow luxuriantly. Along the poplar hedges I saw blackberry bushes 30 feet high. They were wild blackberries and had grown up between the poplars.

I doubt whether there is a finer park anywhere than on the farm of Macul. It has long avenues of trees 100 feet in height, the branches of which meet overhead and form arbours reaching almost as high as you can see. At places other avenues meet these, and one stands and looks down these long arbours in four different directions. There are groves of great trees planted so regularly that every way one looks the eye runs along the straight line of one of the rows. There are lagoons which wind in and out among mossy rocks and beds of flowers. Swans and other water-fowl swim upon the lagoons, and over their dark waters orange trees, palms, and weeping willows hang. Here you walk upon what seems a natural bridge, in the centre of which is a rustic table under a canopy of bark, and there a waterfall splashes over the rocks, and as you look upward you see bronze statues of Neptune and his wife which the silvery drops are spraying before they flow onward to their falls. Here is a winding cave and there a lemon grove laden with yellow fruit. There are hedges of roses and other flowers, great greenhouses filled with orchids, and in short a variety of beautiful things. It takes 30 men to care for the gardens alone, and 180 men are employed in the vineyards.

One of these big farms always has its manager or major-domo. It has its sub-overseers and its army of *rotos*, or common farm hands. The *rotos* are of the cross formed by the union of the Indians and Spaniards. They are the labouring class of the country and correspond to the peons of Peru. They are, however, of a different character from the Peruvian labourers, although fully as drunken and as shiftless as to money-making and money-saving. They are brave to excess and will not tolerate abuse or insult. You can kick a Peruvian peon and he will smile; the

Bolivian servant, it is said, is afraid that his master is angry with him if he does not thrash him once or twice a month, but the Chileno would be likely to resent such treatment with a stab or a blow. These men all carry knives, and on provocation they do not hesitate to use them. They care little for life, and I am told many of them would kill a man for a dollar. On the other hand, they are usually fond of the men they work for, and it is hard to get them away from the estates where they were born.

Most of the *rotos* are in debt to their masters. They live on the estate, each having for himself a hut and about two acres of ground; they are paid from 40 to 60 cents a day for their work. This is in Chilean silver, so that the wages are really only from 14 to 20 cents a day. They receive food in addition to their wages, but this is only for themselves, not for their families. Their first meal is usually a couple of handfuls of toasted wheat flour, which they mix with water to form a mush, or bake in a cake. At noon they have a bowl of hot beans, and for supper, or dinner as they call it here, they get a second bowl of beans with perhaps some toasted meal added. The last two meals they eat in the fields, with what extras their wives bring them from home. They sit down on the ground to eat, and their only eating utensil is an iron spoon, or what is perhaps more common—a mussel shell. It is on such foods that the *rotos* work from sunrise to sunset; and on that they carry enormous burdens and do the heaviest of work.

The homes of the *rotos* are little better than our pig-pens. They are usually just high enough to get into and not over fifteen feet square. Their walls are of wattled twigs, sun-dried bricks, or, in the south, of boards; the roofs are usually of thatch; the earth is the floor and in many cases the bed of the family. A box or two and a table form the furniture. A house seldom has more than one room, and the people herd together, several families often occupying the same apartment.

The chief end of the *rotos'* life seems to be to get drunk. He works only for this, and nine-tenths of his kind are in a state of intoxication at least once a week. He usually stays drunk and will not work as long as his money lasts. For this reason Monday is called the "*rotos'* holy day" for he is so drunk on Sunday that he has to take Monday to "taper off." The men, women, and children all drink together. None of them

seems to have any desire to better his condition and all continue in this state till they die. The liquor used is the vilest of alcohol, made of potatoes and rotten vegetables. It would, as one of their employers says, kill an ordinary man at a thousand yards. They gulp it down in great quantities and drink it, not for the pleasure of drinking, but to get drunk.

The result of their excesses, of their poor food, and of the insanitary condition of their houses is that the mortality among them is very great. They breed like Australian rabbits, and their babies die like flies. Only the strongest children live; the peon child who has constitution enough to grow up in Chile has constitution enough for anything. It is, perhaps, for this reason that the peons as a class are as strong as any people in the world. I have seen rotos carrying bags of nitrate, each weighing 300 pounds all day, and tossing them about like bags of feathers. Four of them will lift a piano and trot off with it, and at the mines peons may be seen carrying bags of ore, each weighing 150 pounds, up the notched sticks that serve as ladders, all day long.

Comparatively few rotos ever go through the marriage ceremony, but nearly all have wives, and they are, as a rule, true to them. They are kind to their old people and always ready to help one another when in trouble. They have the humour of the Irish and the superstition of the Chinese, and are as great fatalists as the Turks. They are as treacherous in their enmity as are the Spaniards from whom they are descended, and will stab you in the back if they have the chance. It was thought that the system of common schools inaugurated by the Chilean government might attract the peon. It has not done so, however, to any extent, and to-day of the 300,000 people in Chile less than one in four can read and write.




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THE NIAGARA OF CHILE

CHAPTER XXVI

LIFE ON THE CHILEAN FRONTIER

HOW THE SOUTHERN PART OF THE COUNTRY IS BEING OPENED UP TO SETTLEMENT—GOVERNMENT AUCTIONS WHERE LAND IS SOLD IN LOTS OF THOUSANDS OF ACRES—A LOOK AT THE FRONTIER CITY OF TEMUCO AND SOMETHING ABOUT CONCEPCION, THE METROPOLIS OF THE SOUTH—THE CHANCES FOR INVESTMENT—BIG FARMS AT LOW PRICES—VALUABLE MINES—A JOURNEY INTO THE COAL MINES UNDER THE PACIFIC OCEAN ON AN ELECTRIC TROLLEY.

OUTHERN CHILE is seldom visited by travellers, and yet it is one of the most interesting parts of the country. Northern Chile is a desert. For one thousand miles south of the Peruvian boundary there are not enough trees to furnish switches for the public schools. For hundreds of miles south of Santiago the only trees to be seen are those which have been planted along the irrigating ditches, and it is only when one reaches the neighbourhood of Concepcion that one sees other trees of any size. After this the country changes and you come into a land of woods. Within the past few days I have been travelling through forests. I have been in the frontier regions of Chile where large farms have been cut out of the woods, and where the stump-filled fields remind one of the newly settled regions of our wooded Northwest.

The greater part of southern Chile is covered with natural forest. It contains some of the best soil in the country and has so much rain that the farms do not require irrigation. Until within recent years it has been a wilderness. Now the government is opening it up for settlement. Railroads are being extended down into it, and new towns and villages are springing up. The frontier towns remind one of the new settlements in the United States. Take Temuco, for instance, where I spent some days; it is twelve years old and has a population of 10,000 people. It covers about as much space as an American city of the same size; its muddy streets are, however, wide, and

the one and two-story houses which line them are wooden. They have ridge roofs and many of them are mere shanties. Although the climate is as cold as that of Washington, not a house has a chimney; the people generally believe fires to be unhealthy and, like the Chinese, rely upon their clothes to keep them warm. The streets cross one another at right angles, and in the centre of the town there is a park or plaza of about an acre, where the military band plays and where the people walk about on Sunday afternoons and chat with each other.

Temuco has a club where you find the latest English, German, and Chilean papers. It has three hotels, two French, and one German, all of which are better than the hotels in American towns of the same size. It has saloons, where raw alcohol is sold to the peons and Indians, but the saloons are fewer than in an American town of similar character. It has several Catholic churches, a Protestant mission, and a school established by the missionaries of the Methodist Episcopal Church.

The street scenes of Temuco are interesting. There are many curious costumes. There are dark-faced Indians, Germans, and well-dressed Chilenos. Dark-faced men with ponchos over their shoulders and the air of brigands bring in great carts drawn by oxen. Each man carries a goad, fifteen feet long, and directs the oxen by striking them on this side and that. Now and then one sees teams of six or eight of these beasts.

Oxen in fact form an important element of Chilean transportation and farming. It is on ox-carts that the thousands of bushels of wheat grown in the vicinity are brought to market. Oxen everywhere do the ploughing, the hauling of lumber, the draying, and everything that heavy horses or mules do with us. The method of yoking the oxen is the same here as it is all over Chile. The yoke rests on the neck just back of the horns. It is tied by straps to the horns, and all of the pushing or pulling of the cart or plough must be done with the head. The yoke is a heavy piece of wood, so fastened that one ox cannot move his head without the other, so that it is impossible for him to swing it from side to side. The tongue of the frontier cart is not unlike a telegraph pole: it is a part of the cart itself, so that the oxen have the weight of the cart resting on their horns. This is cruel in the extreme, and the oxen move painfully along, with protruding eyes, as they drag their heavy loads.

In company with Don Augustine Baeza, the government inspector of colonization, I made a trip into the wilderness over thirty kilometers of new railroad, which is almost finished, but not yet ready for traffic. The road is being built by the State to open up new lands; it is part of a system which will extend from one end of agricultural Chile to the other. It is well built with 60-pound rails and the English four feet, eight inch gauge. The rolling stock will be American. The road will cost, excluding the bridges, about \$12,000 gold per mile. It was in a Baldwin engine and on American hand-cars that we made a part of our journey over the line. The steel bridges, of which there are two, each costing over \$100,000 were brought from France. Why America did not get the contract I do not know, a large number of the best of the Chilean railroad bridges having been imported from the United States.

It was interesting to notice how the Chilean government opens up and disposes of its public lands. It builds its own railroads and regulates the settlements upon them. It lays out the lots about the stations, selling them at low prices to actual settlers. The railroad-town boomer has no chance along the government lines of Chile. Other government lands are sold in large tracts at auction, the auctions being held in different parts of the country once or twice a year. Just now money is scarce and valuable lands sell for low prices. The land is usually sold in blocks of fifteen hundred acres, but one purchaser can buy at each sale up to five thousand acres, and if he wants more he can, of course, purchase an additional amount through a third party or under another name. At such sales a quarter of a million acres are often sold at one time, bringing from \$1.75 to \$33 gold per acre, according to location and the character of the soil. The buyers must pay one-third cash, and the balance, without interest, in ten equal instalments extending over ten years. Many of the rich men of Chile have become so by buying these lands, as they rapidly increase in value. The only provision required by the government is that the purchaser shall fence in his property.

Chile has been anxious to secure immigration and in the past has offered extraordinary inducements to colonists. Until lately each male immigrant was given one hundred acres of land, a team of oxen, a cart, a barrel of nails and three hundred boards

to build him a house. He was also loaned money for his passage from Europe to Chile, and was paid fifteen dollars a month for the first year of his residence. He received besides fifty acres additional land for every son over ten years of age. Of this amount, however, the land alone was free. He was expected to pay back all advances, the whole amounting to about \$600, within eight years after his arrival. These terms have now, however, been discontinued. While they were in force, numbers of Germans came into Chile, and to-day parts of the New South Chile are largely German settlements. The cities of Valdivia and Puerto Montt, situated on harbours on the south coast, are to a large extent German cities, and most of the property there belongs to Germans. They own great wheat farms about Angol and Traiguén, large towns in the region to the south, while they have established tanneries and breweries in a number of places. The trees of southern Chile furnish excellent tan bark, and a great deal of sole leather is made at Valdivia and shipped thence *via* Hamburg to Russia.

There is much good land in Chile, and some of it can be bought very cheaply, but I would not advise any but those prepared to farm in a large way to come here. Labour is so cheap that the ordinary American workman cannot compete with the Chilean *roto*. The only openings for our people are as proprietors and managers. The man who can bring with him capital of \$10,000 and upwards—better \$50,000 or \$100,000—can make money in farming or in land speculation.

Owing to the extravagance of the Chilenos, the fall of silver, and the possibility of complications with the Argentine Republic, the times are at present hard. Many of the large estate owners are in straitened circumstances, and some of the best of the big estates are being sacrificed. I am told that farms that have paid as high as 20 per cent on a valuation of \$300,000 can now be bought for \$100,000 or less. Many such farms are irrigated. It takes much money to operate them, but their profits are proportionately large. The farmers pay from 10 to 12 per cent for what money they borrow from the banks, and the complications of the times have so involved them that they have been compelled to sell.

It seems to me that there are many chances for good investments in Chile. There are opportunities for electric franchises

in the larger cities. Several of the best copper mines are idle for lack of money, and there is nitrate territory, still undeveloped, near the fields, into which English companies have put more than \$100,000,000, and out of which they have taken fortunes.

One of the most promising of the money-making fields in the southwest of South America is in the coal mines of Chile. There is a great bed of coal running along the coast southward, beginning at about 300 miles below Valparaiso. No one knows the extent of the deposit, or how far it reaches down under the water. The mines now being operated are near Concepcion in the neighbourhood of Arauco Bay. Millions of dollars' worth of coal have been taken out of them, and they are now producing many hundred thousand tons of coal every year.

During my stay at Concepcion I visited some of these mines. They are different from any mines we have in the United States and are in some respects far more difficult to work. The seam of coal, which at its best is about five feet thick, begins at the shore and runs down under the waters of the Pacific Ocean. The rock above the vein is slate and shale, and so compact that the water does not drip through. The tunnels are so clean that one could walk through them in a dress suit without getting soiled. The latest machinery is employed, and in visiting them I had several experiences which it is hard to realize could take place in Chile. Think, for instance, of riding on an electric trolley coal train through a tunnel over a mile long under the Pacific Ocean at a speed of twenty miles an hour! Imagine mines lighted by electricity, forming a catacomb of corridors and chambers under the ocean! Realize that just above great steamships are floating, and that the coal taken out of this bed of the Pacific is being shovelled into them. To the picture add sooty miners, half-naked, blasting out the coal, loading the cars, and follow the train carrying twenty-seven tons of black diamonds to the shaft, where a mighty steam engine lifts four of them at a time to the surface, and you have some idea of what is going on in the Lota coal mines.

The mines are now producing 1,000 tons of coal per day and 750 miners are employed in them. They pay a profit running high into the hundreds of thousands of dollars a year and are as carefully managed as any of the great coal properties of our


own country. I asked as to the pay of the miners and was told that they receive from ninety cents to one dollar Chilean, or from thirty-one to thirty-five cents of our money. I wonder what our Pennsylvania miners would think of such wages. The Chilean miners, however, have their houses rent free and coal is furnished them at cost price.

The Lota coal mines were the foundation of the Cousiño fortune, of which much has been read in the stories published of Doña Cousiño, the so-called richest woman in the world. It was her husband, Matias Cousiño, who opened the mines. He worked them to such an extent that a town of 14,000 people grew up about them. He established great smelting works near by, to which in his own steamers he brought ore from his copper mines in the north. This smelter is still in operation near Lota. It is just below the beautiful park and palace which Madame Cousiño has made at a cost of many thousand dollars. The park is full of wonders of landscape gardening and picturesque effects of land and water. It has winding walks, grottoes, and cascades. Statues of Indians and mythological characters are scattered here and there through it. There are deer and other animals in its woods, birds of many kinds in the great aviary, and altogether such a variety of curiosities of nature, art, and animal life as one seldom sees outside of a public museum or a zoological garden.

CHAPTER XXVII

THE ARAUCANIAN INDIANS

ODD FEATURES OF LIFE AMONG THE RICHEST AND BRAVEST OF THE SOUTH AMERICAN INDIANS—A VISIT TO THEIR RESERVATIONS IN SOUTH CHILE —PRETTY INDIAN MAIDENS—HOW THEY ARE COURTED AND MARRIED—CURIOUS CUSTOMS AT BIRTH AND DEATH—THE ARAUCANIAN RELIGION —AN ARAUCANIAN WOMAN WHO CLAIMS TO BE 130 YEARS OLD.

 I WANT to introduce to the reader the richest, proudest, and bravest of the Indians of the South American Continent—Indians who once owned the greater part of Chile, and who, for three generations, with wooden lances and bows and arrows, waged a successful war with the Spanish invaders. They killed the founder of Santiago, Pedro Valdivia, who came south to conquer them. They destroyed Spanish forts, besieged Spanish cities, and receded southward only as they were forced foot by foot to give way. The war lasted over three generations. As it went on the Indians learned more of the tactics of the Spaniards and their organized troops of cavalry, and they attacked scattering bands of the enemy wherever they found them. They carried off arms, cattle, and horses; while they waged war to such an extent that their subjection cost Spain more men than did her conquests of Mexico and Peru. And this though the Araucanians were in number comparatively few; there never were more than 100,000 of them. At the time of Valdivia they were divided into separate tribes, which were combined only by the common cause of resistance to the Spaniards. When finally conquered they refused to become the slaves and hirelings of their conquerors, as did the Indians farther north, and to-day they maintain their identity, owning their own lands, and looking with scorn upon the descendants of the whites who have robbed them of their country.

The Indians I refer to are the Araucanians, the famous native fighters of south Chile. I am writing this chapter in Temuco, on

the edge of one of their reservations, and I have just returned from a hand-car trip over a railroad which the Chilean government is building through their country to open the lands adjoining it to settlement. The Araucanians have long since given up their fight against the whites, and the whites are doing what they can to civilize them. They have given them lands, which they are not allowed to sell, and have established for them Indian schools modelled after those of the United States. The progress, however, is not great, for the demon of alcohol is slowly but surely wiping out what is left of the race. There are, it is estimated, only 50,000 now remaining, most of whom are scattered over the hills and valleys of southern Chile.

There are many Araucanians to be seen in Temuco. They come in to trade, some on foot and some on horseback, both men and women riding astride; many are in rude ox carts, riding on the loads of wheat, barley, and other produce which they bring in to sell. I saw one to-day seated in a cart on two fat hogs, which he was bringing to market; his pretty daughter rode behind on a pony. She wore heavy flat earrings of silver, each as big as the palm of my hand, and upon her breast was a silver plate of diamond shape, hanging by a silver chain, which made a musical jingle as she trotted by. A group of Araucanian girls, whom I saw soon after, were barefooted and bareheaded. Their dresses were bright-coloured blankets, so pinned at the shoulders that the arms were left bare. The dresses were belted in at the waists with buckles of silver; they fell to the middle of the calf, leaving the lower part of the legs bare, except where bands of silver beads sewed to red cloth stood out above the ankles against the rosy pink skin. Several of the girls wore a second blanket about the shoulders, fastened there by long silver pins.

The Araucanian men have a somewhat similar dress, save that the second blanket is worn as a poncho, thrown over the upper part of the body, with the head stuck through a slit in the centre. Few of the men wear hats, but all tie red handkerchiefs or bands about their heads down over the forehead, leaving the crown of the head bare.

The Araucanians are of the same race as the North American Indians. They are somewhat lighter in colour than most of our native tribes, but have the same high cheek bones and straight black hair. The men have little or no beards. They wear their

hair cut off as far down as the neck and coming down over the ears. The women wear their hair long; it is usually divided into two braids, each wrapped with a strip of red cloth, often decorated with little silver beads; the ends are sometimes tied together with strings of silver balls. They wind the hair up on the top of the head and let the ends of the braids stick out like horns above their faces. Both sexes are partial to bright colours, and the women are especially fond of jewellery. Their earrings are always large, some being worn in the shape of silver plates as big as playing cards, with ear-hooks attached. They wear necklaces of silver beads, and as many silver breast ornaments as they can afford. The Araucanian men are better looking than the North American Indians, and the women when young are plump and pretty. Many of their girls have rosy cheeks, well-rounded forms, beautiful eyes and teeth, and ripe red lips. They look clean; their feet are small, and their ankles are well turned.

The Araucanians have curious customs. Each of the richer braves has two or more wives who live with him in the same hut, the children of the several wives being mixed up indiscriminately, as long as peace prevails in the family. This condition, however, does not always exist. At least, I judge so, for in one of the Indian huts which I visited I found two fires going, over each of which one of the husband's two wives was cooking, while about each woman was gathered her own brood of children.

The hut, which was of boards, with a low thatched roof, was a typical Araucanian home. It had no door, but the whole front was open to the east and so arranged that when necessary it could be closed with skins. The roof was ridge-shaped, affording room for an attic, which was separated from the ground room by a ceiling of poles, turned jet black by the smoke. From these poles ears of corn, strings of onions, pieces of dried meat, and bags of other eatables hung. The floor, which was mother earth, was littered with farming utensils, clothing, saddles, harness, and a variety of other things, the whole giving the room the appearance of a junk shop.

On opposite sides of the hut two closet-like rooms had been partitioned off by poles and skins. In each was a low platform, bedded with straw and covered with sheep skins. These were the private quarters of the different wives, each of whom sleeps with her children apart from the other. In the same hut lived

the great-grandmother-in-law of the two wives, a woman who is, I am told, 130 years old. She is the oldest person in Chile, and if her family traditions be correct, she is perhaps the oldest woman in the world. She is a slender little body, not over four feet high and so withered up with age that she weighs not more than fifty pounds. Accompanying me at the time of my visit was Herr Otto Kehren, a German connected with Don Augustine Baeza, the inspector-general of colonization of Chile, who was also of our party. Herr Kehren is over six feet tall and weighs two hundred and fifty pounds. I had him stand up beside the little great-grandmother-in-law and made a photograph of the two: the contrast was that of giant and pigmy, of old age and youth, of life and death, of withered skin and rosy flesh. As I looked at the old woman the fact that conditions have little to do with longevity seemed apparent. Small at her birth and probably weak, she had lived, although half-fed and poorly clad, for more than a hundred years. When I saw her she was dressed in a ragged navy blue blanket, fastened by a pin of silver over her skinny breastbone. Her lean, shrivelled arms were bare to the shoulder, and her wrinkled legs were naked to the middle of the calf. She was both deaf and blind. Her eyes were grown over with skin so that they looked like two little red buttons of flesh, and her face was as wrinkled as a withered apple. She was led out of the hut by one of her great-grandchildren, a plump Indian maiden of eighteen, and the contrast between eighteen and one hundred and thirty was striking in the extreme. I was told that the old woman still had the use of her mental faculties and that she did much of the spinning for the family. Her great-granddaughters-in-law seemed very proud of her and were thankful for the money we gave her.

In this hut, as I have said, there were two Araucanian women cooking. Their only cooking utensils were iron pots, which they rested upon stones over fires built in holes in the ground inside the hut; the smoke was so dense it seemed to me that I could feel it closing behind me as I pushed my way through it. The women were roasting potatoes and green corn on the coals, upon which savoury stews were steaming. Much of the food is eaten raw and this is true of both meal and meat. Raw mutton and beef cut into small pieces are among the chief dishes of an Araucanian feast. Red pepper is used as an appetizer and raw



alcohol is drunk between the courses. They have a way of taking a living sheep and peppering and salting its lungs while it is dying. This is done by hanging the sheep up by its forelegs and stuffing its windpipe with salt and red pepper. While the sheep is gasping, its jugular vein is skilfully cut and abstracted and the stream of blood turned into the windpipe. This carries the salt and pepper down to the lungs and the sheep at once swells and dies. The lungs are now taken out of the still quivering animal; they are cut into slices and eaten warm with the lifeblood which has thus been seasoned to taste. At all feasts the men are served first, the women acting as waiters and taking what is left.

The Araucanians have curious customs in regard to love and marriage. A father always expects to get a certain price for his daughter, in cattle, sheep, horses, or other presents, and the deal is made beforehand, the groom usually paying as little as he can. The price having finally been agreed upon, the young man comes with his friends and kidnaps the bride. A dark night is chosen, but the time is usually known to the girl, who has her female friends with her for the occasion. It is a matter of wedding etiquette that she should fight against being married, and all the women of the family and her female friends join with her in repelling the groom. The friends of the groom are on hand to help him, and there is generally a lively skirmish, which ends in the bride being dragged from her home by her future husband. He swings her up on his horse and goes off on a gallop, making for the nearest woods. The women pursue, but the groom soon distances them. Having reached the forest, he takes his lady love with him into its recesses and there spends the honeymoon. This lasts but a few days, when the two return to the house of the groom and are considered to be married. Then the husband takes the presents, as agreed, to the father of his wife, and the ceremony is over. If, later on, the husband desires a divorce, he may, under certain conditions, send back his wife to her father; if she proves unfaithful to him he has the right to kill her. If she deserts him and goes back home of her own accord, nothing is said; but if she marries again, the second husband must reimburse the first for the price he paid her father for her.

Araucanian papooses are treated in much the same way as our Indian babies. The little one is tied to a carrying board as

soon as it is born and kept fastened there until it is old enough to walk. The babies are bright eyed and healthy looking and can stand treatment that would kill most white infants. Take the practice at birth, for example: when an Araucanian mother is expecting her baby she goes alone into the woods and camps there on the bank of a stream until the child is born. After the birth has taken place, she bathes the little one in the brook, then dries it, wraps it up in a skin or cloth and fastens it to the board. She slings it on her back by a strap or rope tied about her forehead, and thus carries it home. For a year or so thereafter she carries the baby about with her, taking it to the fields when she goes out to work.

The Araucanians have singular ideas about death, one of which is that their ancestors watch over them, shining as stars in the milky way. They do not believe in the Christian religion as do the descendants of the Incas, and the Catholic missionaries have worked among them with but little success. They are like our northern Indians in their belief in a great father—a great good spirit and an evil spirit. These two, they think, are always fighting one another, and the evil spirit is supposed to follow a man even into the grave. For this reason they stand about the grave at burials with their lances and make noises to frighten the evil spirits away. When one of their number dies he is seldom buried at once. His family, fearing that he will be lonesome on his way to the happy hunting-grounds, try to accustom him first to solitude. They hang the corpse from the rafters or poles inside the hut and for the first day or two speak to him frequently. They talk to him at their meals and treat him as though he were alive. From day to day, however, they pay less and less attention, until they think the dead has grown accustomed to being alone, when they bury him. Sometimes, instead of being hung up, the corpse is laid in the little attic on the poles which form the ceiling of the living-room. How decomposition is prevented, if it is prevented, I do not know; but I should think that the dense smoke, which is incessant in the huts the greater part of the day, would serve to cure anything, dead or alive.

In nearly all of these Araucanian communities there is a prophetess, or woman "medicine man," who is supposed to be able to ward off evil spirits, or tell why they will not let the

troubled one alone. The evil spirit is at the root of all Araucanian woes. It brings bad crops and is the cause of all diseases. In times of sickness the prophetess is called in, when she practices incantations and other antics over the patient. If he recover it is, of course, solely due to her skill; but if not, it must be the evil spirit who has been led to afflict the sick by some one of his enemies. In case of failure, the prophetess proclaims that the patient has been bewitched, and points out the man or woman who bewitched him, and if death ensue the relatives of the deceased are liable to kill the person so charged with being a witch.

The Araucanians are good farmers, not a few of them using some American machinery, such as a plough or other implement. They are rather stockmen than grain-raisers. I found but few of the braves labouring in the fields, for the squaws do most of the farm work, except on the farms of the larger land-owners, where the "rotos," or Chilean peasants are the hired hands. The roto, like most hybrids, is in many respects a worse native than either of the peoples from whom he is descended, often having the vices of both and the virtues of neither. The pure Indian is cleaner than the peon; he is more honest and self-respecting. Until recently no Indian could be got to work for a white man, and to-day the Araucanian feels himself the equal of any person on earth. He has always been a man of some civilization; he was a tiller of the soil when the Spaniards came to this continent, and he has always been a land-owner. The clothes he wears are woven by his wives, and his ponchos all have the bright colours and much of the beauty of the blankets made by the Navajo Indians.

The Araucanian is a shrewd trader, but as a rule he does not care for money. I have often tried to buy the ponchos of Indians I met, offering what I thought ought to have been considered good prices, but have invariably failed. It was the same with the jewellery they wore, which I tried to purchase of the girls. The only places to get such things are in the pawn shops of the frontier towns. The Indians are fond of liquor, and when in want of money will sell or pawn almost anything they possess for the means of becoming intoxicated. This brings them to the pawnbrokers, and the result is that you can pick up their curious jewellery and sometimes their beautiful blankets quite


cheaply. I once saw for sale in Temuco a pair of solid silver stirrups, each weighing a pound. The price was thirty-five Chilean dollars, or about twelve dollars of our money; and I bought an almost new hand-woven poncho, as big as a bedquilt, for ten dollars in silver, or three dollars and a-half in American gold.

It is on account of his craving for alcohol that the government has forbidden the Indian to sell his lands. Until this law was enacted, large tracts were continually passing out of the hands of the Araucanians into those of unscrupulous speculators, and now only a comparatively small part of the Araucanian territory remains to the Indians. South Chile is rapidly settling, and the desire for good land is such that the absorption of the Araucanian Reservations by the whites is only a question of time.

CHAPTER XXVIII

AT THE TAIL END OF OUR HEMISPHERE

A TRIP THROUGH SMYTH'S CHANNEL INTO THE STRAIT OF MAGELLAN—SAILING AMIDST THE CLOUDS AMONG ICEBERGS AND ANDEAN SNOWS—A LOOK AT CAPE FROWARD, THE LOWEST CONTINENTAL POINT IN THE WORLD—THE SAVAGES OF PATAGONIA—THE NAKED ALACALUFS, WHO LIVE IN CANOES—LASSOOING AN ICEBERG—A DESCRIPTION OF THE STRAIT AND ITS MAGNIFICENT SCENERY.

 AM at the tail end of our hemisphere; at the lowest continental point in the world; three thousand miles nearer the south pole than the foot of the Siamese peninsula at the end of Asia; more than a thousand miles farther south than the Cape of Good Hope, with a distance equal to the diameter of the earth between myself and the northern parts of the United States. I am on the steamer *Itauri* in the Strait of Magellan. Just opposite me, the black rocky walls of Cape Froward, the southernmost point of South America, rise almost straight upward to a height of 1,200 feet, and behind them, glistening in the moonlight, are the glacial snows of Mount Victoria, 2,000 feet higher. I am at the bottom of the great Andean chain, the elevations of which are the end of the mighty ridge which ties the continent together. Loaded with copper, silver, and gold, they stretch from here on their sinuous way toward the north pole. They span the equator, they drop their heads at the Isthmus of Panama, and end only at the Arctic Ocean, beyond the gold mines of Alaska and the Klondike. The hills to the southward are a part of Tierra del Fuego, above Cape Horn, and that great white frozen pyramidal cone is Mount Sarmiento, which pierces the southern sky almost 1,000 feet above the altitude of Mount Washington. Behind and in front of my ship, here as black as ink under the shadows of the hills, there turned to silver by the full moon's rays, flows the Strait of Magellan,

that salt-water river, in which, moved by the tides, the Atlantic and Pacific Oceans rush together and clasp their hands to bear up the commerce of the world.

The Strait of Magellan makes the passage between the oceans shorter by almost 1,000 miles. Cape Horn, part of an island almost 200 miles south of it, is surrounded by waters, always tossed about by terrible storms, and ships must go a long distance south to round it. To-night the strait is as smooth as a mill pond, and the *Itauri* is steaming through it as quietly as though it were the swan boat of Lohengrin. We are now almost midway between the Atlantic and the Pacific. We entered the strait by what is known as Smyth's channel, opposite Desolation Island, about 30 miles from Cape Pilar, which marks its western end. We could see the two massive rocks of the Cape as we turned to the eastward. They rise almost precipitously to a height of 1,500 feet, and when the air is clear they are in sight for many miles.

Beginning at Cape Pilar, the Strait of Magellan runs south-east to Cape Froward. It then turns to the northeast, widening here and there as it goes, until it ends at the Atlantic between Cape Virgens and Cape Holy Ghost. The channel is 365 miles long, with a width varying from 2 to 24 miles. At times our vessel is within a stone's throw of the shore, and again, in the misty air, where the channel widens, the waters seem almost to bound the horizon. This is so only in the eastern parts of the channel, on both sides of which the lands of Patagonia and Tierra del Fuego are low. In the west there is little else than mountains, some of which are snow-capped and many are loaded with vast glaciers slowly sliding down them to the sea.

Below the Strait of Magellan there is a vast archipelago, the smaller islands of which are mountain peaks rising out of the waves, and the largest, the Island of Tierra del Fuego, which is larger than many of our American states; it has mountains and valleys, vast forests, and extensive plains upon which have lately been established some of the largest sheep farms in the world. North of the Strait, to the east, lies the end of southern Patagonia, and on the west is a continuation of the archipelago of Tierra del Fuego, the smaller islands of which, with almost all of Tierra del Fuego proper, belong to Chile. The republic has an area of land here which she calls the territory of the Magel-

lans; it consists of 75,000 square miles, half again as large as the State of New York, and almost twice the area of Ohio.

Some of the Chilean naval vessels are here engaged in surveying the channels and harbours, but the greater part of the region is almost as unknown as it was in 1520, when Ferdinand Magellan, the Spanish navigator, discovered the Strait. The land and the people have been misrepresented by travellers from Darwin down to within recent years and it is only lately that opportunities have been afforded for careful investigation. Even now the savages I see here are less known than many tribes of Central Africa, and only the coasts of a few of the islands have been explored. The sheep farmer, the gold digger, and the government vessels, are, however, making headway, and within a few years this great archipelago will be a *terra incognita* no longer.

The generally accepted belief regarding southern Patagonia and Tierra del Fuego is that they are something like Greenland or the islands of the arctic seas. The geographies represent them as wastes of ice and snow, desolate, forbidding, and terrible to the traveller. For the past four days I have been winding in and out of the channels along the western coast of lower Patagonia. Our sail has been through a series of scenic panoramas that can hardly be surpassed. We entered the archipelago by what is known as Smyth's channel route, about 400 miles above the Strait of Magellan, and coasted slowly along through one channel after another until we came into the Strait proper, at Desolation Island. Darwin compared the glaciers of Mount Sarmiento in Tierra del Fuego to a hundred frozen Niagaras. The waters along the lower end of western Patagonia present combinations which make one think of a hundred Lake Comos, Lake Genevas, and Lake Lucernes tied together in one ever-widening, ever-changing river. Here are the beauties of the Thousand Islands of the St. Lawrence, added to by snow-capped mountains kissed by the sun, and mighty glaciers sliding down into masses of dark green vegetation. Here are giant rocks, cathedral-shaped, covered with moss, rising straight upward from the water for a thousand feet; mountains, their heads lost in the clouds, dropping almost precipitously into the sea; narrow gorges, in which the steamer must tack this way and that as it winds its way through islands of green and islands of rock resting in lakelets; fields of floating ice, through which the boat crashes; narrow fiords where

the black water is 3,000 feet deep, and in fact such a variety of scenic wonders of cloud, mountain, and sea that I doubt whether their like can be found in the world. Suppose you could take the most picturesque parts of the Andes, the Himalayas, and the Alps, sink them up to their necks in dark blue water, pull the cloud masses down with them into the sea, and wrap their rugged sides far up from the water's edge with a wonderful mantle of green, which is now brilliant in the sunlight, anon frosted with snow, and at another time so loaded with ice that it lies in terraces up their sides, and add to this the wonders of the south Pacific skies, and you may have a faint idea of Smyth's channel. Indeed, I despair of giving a picture of our sail through the archipelago. It lasted three days and afforded such a series of views that only a biograph of the gods, operated by their own hands, could depict them on the retina of one's imagination. All I shall attempt is to take the reader with me through some few places by a transcript of my notes made on the voyage.

Before we proceed let us look at the steamer. It lies near Concepcion in the bay of Coronel. It is the *Itauri* of the Kosmos line, bound for Hamburg; a German ship of 6,200 tons, lighted by electricity and heated by steam. Captain Behrmann, her commander, is German, and so are the passengers, officers, and crew. We speak German at the table, and are, in fact, a small slice of Germany in one of the quietest harbours of the coast of Chile. I go to my room, which is as good as any of the first-class cabins of an Atlantic liner. We have our first meal here. The cooking is German. As I go down to dinner I hear the squawk of a chicken. Our meats are carried alive on board, so that we hear, later on, the baa-ing of sheep, the grunting of pigs, and the cackling of geese, mixed with the crunching of the ice fields as the steamer makes its way through them.

Before I pay the \$70.00, which is my fare to Punta Arenas on the Strait of Magellan, I ask if the ship will go *via* Smyth's channel. The reply is "Yes." The Kosmos is the only line that takes this route, the other steamers going through the Strait, preferring to stand the storms which sweep up along the west coast from Cape Horn to the narrow, dangerous, slow, but more quiet, land-locked waters of the Patagonian coast. We shall have to travel very slowly and must anchor at night.

But before we go let us look further at the ship. What is its cargo? It consists of 3,000 tons of saltpeter for Germany, 2,000 barrels of Chilean honey for different parts of Europe, hundreds of rolls of Chilean sole leather for Russia, and wheat and wine for Punta Arenas and Montevideo. The steamer is now taking on 900 tons of coal. Brawny Chilean peasants are putting it into the ship; they stand in lighters and shovel the coal up to the platforms under the doors of the hold. Here other peasants shovel it in. They swear as they work, and we hear them still swearing and heaving as we go to bed.

We awake far out in the Pacific. The steamer is rolling, the white caps are dancing over the waves, and away off to the eastward we can make out the faint blue outlines of southern Chile. A day later, in storm and rain, we steam past the long, narrow island of Chiloe, which the government is trying to colonize, and on the evening of the third day come into the Gulf of Peñas and anchor at the entrance to the channel. The steamer moves slowly, though the water is like a mill-pond. We seem to be in a great river rather than on the ocean. We are sailing among the clouds through the water-filled ravines of some of the greatest of the world's mountains. On our right are grass-clad islands; on our left are rugged, jagged peaks, rising in all shapes out of the sea. There is one clothed in green, shaped like the Pyramid of Ghizeh, and there is another which is a fair likeness of the smashed-nose Sphinx. In front the green hills are climbing over one another like a troop of giants playing leap frog, and farther on they rise upward in fort-like walls of green a thousand feet high, losing themselves in a misty white cloud which rests above them.

As we proceed, the channel narrows and widens. Now we are in lakes surrounded by snow-capped mountains, now in cañons, now we sail by a break in the mountains, a deep fiord with moss-green walls, snow dusted, a thousand feet high, and filled with black water a thousand feet deep. As we look, the sun breaks its way into the gorge and turns the water to silver—it paints diamonds in the snow of its moss-green hills. Over there is a glacier, a great green mass, shining out upon the ragged sides of a snowy mountain. As we look the sun has struck it, and it is now a bed of emeralds in a setting of frosted silver.

The weather and the sky change every moment. We have an ever-varying panorama of sky and sea and land. We sail out of the sunlight into a snow storm, and, by and by, steam right out of the snow into the sun. Now the sky is almost blue overhead, with fleecy white clouds scattered here and there through it. Cloud masses here nestle in the velvety laps of the hills, there they wrap themselves about the snowy peaks as though to warm them, and beyond they stoop down and press warm, tantalizing kisses upon their icy lips. Upon the snow-dusted hills and dark waters are dashes of silver where the sun has poked its way through the clouds. The varying light makes the channel on one side black; on the other side it is of a beautiful, yellowish green; and behind, where the sun strikes it, the ship has left a path of molten silver.

The hills change even as the water under the sun. Now they are dark, anon the sun washes them with its rays, and the ferns, moss, and trees brighten. The ragged volcanic background of the rocks shows out, and through the green and black, falling hundreds and sometimes thousands of feet, almost straight down, are silvery cascades, some as tiny streamlets, others in larger volume. These are to be seen all along these inland channels. They come from the glaciers and the mountain snows.

One of the strangest of the atmospheric effects happened on our third day in the channel. The mountain-walled river had widened and we were again coming to narrows, when over our pathway in front of us a rainbow sprang from the snowy summits of a low mountain in the south to that of another mountain almost opposite on the north of the channel, making a great rainbow span over the dark water. It was a splendid, many-coloured arch of the gods seemingly resting upon pedestals of frosted silver. As we approached the rainbow faded and the sky became blue overhead, but a great wall of fleecy white clouds had dropped down upon, or rather risen up from, the water. When I first saw it I thought it was a field of icebergs. It was as white as snow and it extended upward to a height of several hundred feet, stretching across the channel from mountain to mountain. Above this wall the sky was clear and the only other clouds to be seen were those hovering over the mountain peaks. We sailed out of the brightness right into this cloud wall, out of the dry air into a mist so dense that we could almost wash our

hands in it. Half an hour later we were again under a clear sky. At times the masts of the steamer were in the clouds and the deck was clear and dry; anon the clouds would form a roof over the channel, and again the lower walls of the hills would be hidden and we could look over the clouds at the green and snow above.

It is strange to think of green moss, green trees, and a mass of dense green vegetation amid snows and glaciers. That, however, is what we have here. The glaciers slide down into the green, and the snow falls and melts upon it all winter long. In many places the green is clear, in others it is snow dusted, and in others still loaded with snow masses. Only upon the highest peaks is it all snow and ice. Even in the jungles of India I have not seen so dense a growth of trees and plants as along the west coast of Patagonia. We had a chance to go on shore every afternoon when we anchored for the night. Pushing our way into the country was, however, impossible. The trees are evergreens, generally small, but so dense that we could walk on their tops on snow shoes. A bed of moss as deep as one's waist covers the ground about them, and great ferns with leaves as long as one's arm extend out in every bare and rocky spot. The ground is saturated with moisture. The mould and rotting wood of centuries covers it, and you sink in and stumble about more than you would in an Irish bog.

It is only on the higher parts of the mountains that vegetation ceases, and only there that the climate is such as to produce glaciers and perpetual snow. The icebergs which we saw in the channel come from these glaciers, which are among the finest in the world, many of them surpassing, it is said, the largest glaciers of the Alps. In Tierra del Fuego they line the channels in places with walls of ice a thousand feet high, and ships must sail carefully not to be struck by the icebergs which, in blocks of a thousand tons and upward, break off from them with a noise like thunder and fall into the sea. Icebergs often fill Smyth's channel so that it is impossible to get through. This was the case last year, when one of the steamers was forced to go back, and just where we are now passing, the ship upon which I now am had its bows crushed in by an iceberg. This glacial ice is not like that of our rivers and lakes; it is as hard as a rock and of a crystalline green.

During our second day in the archipelago the captain stopped the steamer, lassoed an iceberg and towed it close up to the ship. It was a little berg, no larger than a Washington city lot, but it was of a beautiful opalescent green, with a top of frosted silver and many angles and projections. With crowbars the steward and a boat load of sailors attacked it and broke off enough ice to last us the remainder of the voyage. One of the great log chains used for hoisting heavy cargo was first coupled about the corner of one of the ice masses, then a lever in the engine room was pulled and a section of an iceberg was raised to the deck of the vessel. Some of these blocks were very large; altogether we must have taken on board a hundred tons of ice.

During our voyage through these strange islands we saw but little animal life. Now and then we passed a small school of seals that popped their heads out of the water and took a peep at the steamer as it went by. We saw half a dozen whales during the trip and occasionally an albatross and a gull.

We had a number of visits from the wild savages of the Magellans, the naked Indians of the Patagonian channels, who are perhaps the least known of all wild men. As far as I could learn, no ethnologist has ever lived with or made a study of them. They are different from the Onas and Yaghans of Tierra del Fuego, among whom missionaries have laboured, and several of whom were carried years ago to England. The Indians of Smyth's channel are known as the Alacalufs: there are, all told, only about 500 of them. They have no chiefs or tribal relations, each family taking care of itself, and living in its own canoe.

The Alacalufs are strictly canoe Indians; they live almost entirely upon the sea, and they are found only in these straits off the coast of southern Patagonia. They sleep sometimes on land, in little wigwams three feet high, made by bending over the branches of trees and tying them together. They build a fire in front of the wigwam and crawl into it for the night. Their canoes are well constructed: they are about fifteen feet long, about three or four feet wide, and, perhaps, two feet deep. They are made of strips of bark sewn together with sinews; they are cross ribbed, and so made that they can be easily paddled. In the centre of each boat is a fire, built on some earth, and about this sit those of the family who are not paddling or steering the boat. They are curious-looking people, wearing no clothes and



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SAVAGE WOMANHOOD OF THE STRAIT OF MAGELLAN

apparently comfortable even amid the snows of winter, with only a coating of fish oil to protect them. Since they have seen white men, however, they are glad to get such clothing as they can beg, and they come about the ships and ask for cast-off garments, food, and tobacco. Some of those we saw were as naked as Adam and Eve before the Fall; others wore pieces of old clothes.

One man, I remember, who was apparently the head of the almost naked family in his canoe, had on a short vest, open at the front, and a rag apron as small as a lady's handkerchief tied to a string about his waist. His favourite wife, lightly clad in a string of beads, sat in a boat near the fire, with a naked boy of two who sucked his fingers as he leaned against her; his other wife, a buxom girl in her teens, held a naked baby to her breast with one hand, while she paddled the boat with the other. I was meantime shivering in my overcoat, but as I looked I could not see that the savages were either cold or miserable. The young mother at the end of the boat had on only a cast-off sack coat, which she had thrown over her shoulders to partially cover herself and her baby. As she paddled, this kept falling off, and her person and that of the baby were exposed. Both were plump, as were all the children.

The men and women were rather under- than over-sized. Their faces were somewhat like those of our Indians. The men were especially dirty, evidently from the use of paint. The naked brave in the vest had a thin black moustache. All had black hair; the women wearing it long and the men cut off, so that it just covered the ears and fell down in a thick black fringe over the eyes. Their skins were of a brown coffee colour, and all had very white teeth, which they showed again and again as they laughed. Their voices were not unpleasant, and they mimicked us as we called out to them.

The man in the vest had two or three otter skins, which one of the officers of the ship endeavoured to buy. The Indian would not come on board, however, and the officer had to crawl down the side of the ship and hold on there over the boat by a rope, while he sought to make the trade. He had a big butcher knife in one hand, while he held on to the rope by the other. He wanted the savage to give him two skins for the knife, but the savage thought that one was enough. The naked man would not


give up the skin until he had the knife in his hand, and in the trade he displayed no little shrewdness and ability to bargain. Neither party could understand the other, and neither would trust the other. In the end, the savage, however, got the best of the bargain. The only things that can be used in trading with these people are bright cloths, beads, tobacco, and knives. They do not know the use of money, and would rather have a jack-knife or hatchet than a gold nugget. They were evidently afraid to come on board, for they are by no means friendly to strangers, and will kill them if they can attack them with safety. They use bows and arrows for defence and in warfare.

The food for the family is usually got by the women of the tribe, of whom each man has one or more. The food consists of fish, mussels, and now and then a fox, seal, or otter. The women fish with lines, but without hooks. They tie a small piece of meat to the end of a line, and when the fish has swallowed this it is jerked into the canoe. The Alacalufs are fond of whale meat, and a dead whale, it is said, is cut in pieces and buried, to be eaten in its various stages of decomposition as long as it lasts. They understand what tobacco is, and those we met were quite as anxious to get tobacco as food. They had but a few foreign words, one of which was "Frau Lehman," the term by which they designate all foreigners; the two other words in use by them were "galleta," the Spanish word for sweet cakes, and "tabac," the German equivalent for tobacco.

CHAPTER XXIX

IN THE CAPITAL OF THE MAGELLANS

HOW THE PEOPLE LIVE AND DO BUSINESS IN THE MOST SOUTHERLY CITY IN THE WORLD—LOTS WHICH FORMERLY COST A POSTAGE STAMP ARE NOW WORTH THOUSANDS OF DOLLARS—THE BIG SHEEP FARMS OF PATAGONIA AND TIERRA DEL FUEGO—VULTURES THAT PICK OUT THE EYES OF LIVE SHEEP—THE PANTHERS AND THE INDIAN SHEEP-STEALERS.

 PUNTA ARENAS is the southernmost city in the world. It is at the extreme foot of the South American continent, 1,200 miles nearer the south pole than Cape Town at the lower extremity of Africa. It is 7,000 miles south of New York, in the corresponding latitude of Labrador. Still its winters are warmer than those of Washington city, and now, at its coldest, the earth is covered with green.

Situated on the northern coast of the Strait of Magellan, midway between the Atlantic and the Pacific Oceans, more than a hundred miles north of Cape Horn, Punta Arenas is the commercial capital of a vast region of land and sea which is almost unknown to the outer world. From the spot where I write I can see the blue forests of Tierra del Fuego, on the opposite side of the Strait. There are a vast number of smaller islands about, and behind me, stretching away for hundreds of miles, are the mountains and sheep farms of Patagonia. There is no town of any size within a thousand miles. We have no telegraphic connection with the outer world, our only news coming from the steamers passing through the Strait.

Punta Arenas is a free port, and quantities of provisions and other stores are brought here to supply the steamers and sailing vessels which pass through the Strait of Magellan on their way to and from Australia and Europe, or the east and west coasts of South America. Just now there are English and German steamers in the harbour loading and unloading freight. An American schooner from Boston, with a party of a dozen men *en route* to

the Klondike, is taking in provisions, and one of the ships of Grace & Co., bound for New York, passed by this morning. A steamer from New Zealand, with a cargo of frozen sheep for London, left yesterday. There are several wool schooners in the harbour, and the little steam-tug, which carries passengers three times a week to and from Tierra del Fuego, is just puffing out on its voyage across the Strait.



INDIANS OF PATAGONIA

Punta Arenas lies right on the Strait of Magellan. It has a good harbour, the land about which slopes gently upward from the water. Upon this has been built a straggling town, more than a mile long and a quarter of a mile wide. Back of it there is a hill perhaps a hundred feet high, and farther in the rear may be seen the last of the Andes, which here rise from three to five thousand feet above the sea, their tops covered with snow.

The city has been cut out of the woods, and as we enter it we are reminded of the frontier settlements of our wooded north-

west. Its houses are scattered along wide streets, with many recurring gaps, and here and there a stray stump. The streets are a mass of black mud, through which huge oxen drag heavy carts by yokes fastened to their horns. At one place the sidewalk is of concrete, at another it is of wood, and a little farther on it is of mud, and the pedestrian must balance himself on a log to make his way over it. Many of the houses are built of sheets of corrugated iron, their walls wrinkled up like a washboard, and all have roofs of this material. A few are painted, but nearly all are of the galvanized slaty colour of the metal as it comes from the factory. None of the cheaper houses has a chimney. The stove pipes which stick up through the roofs, and which you see here and there coming out through the windows with upturned elbows, take its place.

There is plenty of building space, but when you ask the price of vacant lots you find that property is high. What in the United States would be a \$50 shanty is here worth \$500, and a good business corner will sell for several thousand dollars. Notwithstanding, these same lots were within a few years given away for a revenue stamp. The Chilean government was then anxious to increase the size of the colony, and it offered building sites to all who would erect houses and pay the five-cent stamp which the law provides shall be upon every deed. "That lot," said a man to me, as he pointed to a corner just above the Kosmos hotel, "cost me a postage stamp, and I hold it to be worth now \$5,000." The days for such investments, however, are past, and better buildings are going up every year. Now every inch of town property has a fixed value, and there are several business blocks which would not seem out of place in an American city.

Punta Arenas has one residence which would be considered a mansion in Washington city. It is by all odds the finest house near the South Pole. It has cost \$100,000, and its owner is a millionaire widow, young, beautiful, and accomplished. She is the sister of the American consul, and the daughter of a Russian who made a large fortune in sheep-raising. She inherited another fortune at her husband's death, so that she can afford to build a palace even on the Strait of Magellan. Her house is made of red brick covered with stucco, so finished that it looks like light brown stone. The bricks in it were imported from Europe, and workmen were brought from Buenos Aires to erect it.

This house, however, is the only one of its kind in Punta Arenas. Most of the dwellings are one-story structures, which in the United States could be built for from \$500 to \$2,000. Many of the poorer houses, however, are occupied by rich men; indeed, Punta Arenas has as many rich men as any frontier town of its size. It is the metropolis of the sheep industry of southern Patagonia. It has thirty-three men, each of whom owns or controls from 25,000 to 2,500,000 acres of land. Each has tens of thousands of sheep, and the wool clip of some of these sheep farmers is worth more than the annual salary of the President of the United States.

The citizens of Punta Arenas come from all parts of the world. You hear English, German, and Spanish at every corner, and your ears are dinned with the jargon of the Austrian, the Italian, and the Russian. Some of the richest people are Russians; others are Scotchmen, who have come here from the Falkland Islands to engage in sheep-farming: among them also are treacherous Spaniards, smooth-tongued Argentines, and hard-looking brigands from Chile. The lower classes are chiefly shepherds and seamen, and among them are as many rough characters as are to be found in our mining camps of the West. There are no licensed gambling dens or sporting houses, but there are saloons managed by hard-featured young women, who sit in the door-ways during the day and smoke cigarettes.

The Governor of the Magellans lives in Punta Arenas. He is appointed by the President of Chile, and rules not only the Magellans, but the whole of the islands of the Tierra del Fuego archipelago. He has four hundred soldiers stationed in the city. You hear the military bands playing at nine in the morning, when they begin their drill, and again at sunset about four o'clock in the afternoon. The soldiers act as police, keeping excellent order: each has a long sword at his side, which at times he does not scruple to use in making arrests. Of late some of the soldier-police have been using sword-canes. They apparently have nothing but walking sticks, but when resisted they jerk the stick apart and give the offender a thrust under the fifth rib with a sharp blade of steel.

It is curious to think of a social club down here in the home of the guanaco, the seal, the whale, and the naked aborigine. But Punta Arenas has its clubs, where the men meet to have a

good time, to play a game of poker, and have some liquid refreshment. The club is also the fire company, for here, as in many of the South American cities, the fire company is composed of the best men in the place. In Punta Arenas the club parlours, which are well furnished, are over the engine room. In the club you will find besides billiard rooms, two poker rooms, a reading room, and last but not least a bar. The bar is to be found in every club as well as in every hotel in South America.

Sheep-farming has now become the great industry of the region. A large part of lower Patagonia is given up to it, and all the available lands in the Chilean territory of the Magellans, including Tierra del Fuego, have been either bought or leased. It will give the reader some idea of the growth of the industry when I state that in 1878 there were only 185 sheep in all the Magellans. Seven years later there were 40,000, while in 1892 the number had increased to 480,000! In 1895 it was estimated that there were 900,000, and now on Tierra del Fuego alone there are considerably more than a million sheep. The sheep-farmers came first from the Falkland Islands, but more recently Australians, French, Germans, Russians, and others have joined with them in appropriating the lands. The majority, however, still are English and Scotch.

The management of one of these large sheep-farms is interesting. Take that of a company which has two and one-half million acres in Tierra del Fuego. Its one hundred thousand sheep are divided up into flocks of two thousand each. Each flock has a pasture of about six miles square allotted to it. This is just the size of many of our American townships, and if you will imagine a township as one field you will have an idea of the ordinary Tierra del Fuego pasture. This, to many of our farmers, would seem a large area of land for two thousand sheep, but the grass is short in Tierra del Fuego, and from two to three acres of pasture are required for the grazing of each sheep.

Every flock has its own shepherd, who on horseback watches the sheep. The sheep-tender has a number of dogs, mostly intelligent collies, which he so trains that they will obey his signs. The collies understand their master's signs almost as well as if they could understand language. When the shepherd makes a motion to the front, they know that they are to go ahead, a motion to the rear calls them back, and the raising of his hand in the air brings them to a standstill. Other motions send them to

the right and left; in fact, they act for him nearly as well as if they were human beings.

The shepherds are usually Scotchmen, who come to the country on a five years' contract at from \$25 to \$35 gold a month, with the understanding that they are to have meat, fuel, and house rent free. The meat is mutton, the fuel they cut themselves, and their houses are little two- or three-room shanties scattered over the farm. All the feeding the sheep get is from the pasture, for the grass is always green, and sheep can graze in Tierra del Fuego all the year round.

The shepherds do not need to work hard most of the year; nor have they much work at shearing time, for most of the shearing is done by professional shearers, and the shepherds only assist. The shearing time begins in January, and on a big sheep station it lasts for two months. The sheep are not washed before shearing. The wool is cleaned after it reaches the European market. The price paid the shearers is \$4.50 per hundred sheep, at which rate an expert can make fair wages.

Within the past year or so some flocks in Tierra del Fuego have been sheared by steam. A set of knives or clippers, like those used by our barbers for clipping the hair short, is attached to a cord running on an overhead pulley, and a man moves these clippers over the skin of the sheep shearing off the wool. This is said to make a cheaper and closer job than by hand and does not cut the skin. After shearing, the fleeces are carefully spread out, being laid one on top of the other, and packed up in bales of five hundred pounds each. Most of the wool goes to the English markets, where it brings from eight to twenty-five cents per pound. All of the large stations have their managers, overseers, and book-keepers.

Every large sheep-farm has its own store, where the men can get their supplies; and most of the farms are managed after the best business methods. There are, however, heavy expenses connected with the business, and the losses are often excessive. I heard of one farmer, for instance, who paid \$40,000 for "dip" last year. "Dip" is the fluid in which the sheep are washed several times a year to free them from the scab. The scab is the greatest enemy of the sheep; it is a parasite which spreads so rapidly that it will infect a thousand sheep within a few days. It eats into the flesh, getting under the skin, and if not soon destroyed it breeds so fast that the sheep die. The preventive

is a bath or dip which kills the parasite. The dip-fluid is put in a great vat, ninety feet long, six feet wide, and so deep that a sheep must swim to get through it. The sheep are put in at one end and made to swim the length of the trough, when they step out upon a draining board; the dipping is usually resorted to three times a year.


Among the other enemies of the sheep-farmer in Tierra del Fuego are vultures, foxes, wild dogs, and panthers, besides the more savage Indians. The sheep are usually so fat that if one of them fall down and roll upon its back it cannot turn over of itself; it can only lie there and kick. The vultures watch the sheep, and when such an accident happens they attack the helpless animal and pick out its eyes. After this it may live some days, but as soon as it is dead the vultures finish their work by tearing its flesh from the bones. The foxes of Tierra del Fuego are as large as dogs, and they have the look of wolves. They attack the sheep and often drive them into the streams and drown them. There are, moreover, wild dogs in the forests that often come out in packs of from ten to thirty and worry the sheep; there are also panthers, one of which may kill a hundred sheep in a night; and last and worst of all are the savages, who will steal and drive off five hundred sheep at a time.

Yet with all this it may be asked, does sheep-farming pay? Yes, if you can get the land and the sheep. But the pasture lands of Tierra del Fuego are now all taken up, although I am told that there is still some to be bought in Argentine Patagonia. Much of the Chilean lands are held under leases from the government; nearly all is in large tracts, which is necessary on account of the thinness of the pasture. Sheep in Tierra del Fuego are worth on the average \$2.50 gold per head. It is estimated that the ewes will produce an increase of about forty-five per cent of the flock per year, and taking the wool and the increase into consideration, every sheep in a flock should net its proprietor about a dollar a year. The number of employés needed is comparatively small, and the need is being considerably reduced by fencing the pasture-fields with wire. At present it takes a large capital to go into sheep-raising in this part of the world, and considering everything I should say that the chances for the ordinary American farmer or small investor are hardly worthy of consideration.

CHAPTER XXX

TIERRA DEL FUEGO

NEW FACTS ABOUT ONE OF THE LEAST-KNOWN PARTS OF THE WORLD—AN ISLAND COVERED WITH DENSE VEGETATION, HAVING MIGHTY FORESTS AND GRASS-GROWN PLAINS—WHERE THE GOLD MINES ARE LOCATED, AND HOW NUGGETS AND SCALES OF GOLD ARE PICKED OUT OF THE SANDS OF THE SEA—THE INDIANS OF TIERRA DEL FUEGO—THE ONAS, WHO GO NAKED, SLEEP IN HOLES IN THE GROUND, AND WAGE WAR UPON THE WHITES—THE YAGHANS, WHO ARE SEMI-CIVILIZED—THEIR WONDERFUL LANGUAGE.

HE Tierra del Fuego of the geographies and encyclopædias is a dreary land of snow and ice, of glaciers and rocky wastes. Let me tell the reader what the real Tierra del Fuego is. My information comes from what I have seen, and from the men who have lived upon the great island and visited nearly every part of it.

The archipelago of Tierra del Fuego contains as much land as Kansas. It is wider from east to west than from Cleveland to Chicago, and from north to south it is longer than from New York to Boston. The archipelago is made up of hundreds of wooded islands, mostly mountainous, but a few of which have valleys and plains covered with rich grass, on which sheep and cattle rapidly grow fat. The largest islands of the archipelago are Onisin, or King Charles Southland, or Tierra del Fuego proper; Desolation Island, which lies near the western entrance to the Strait, and along which I coasted for miles on my way here; the Isle of St. Ives, Clarence Island, and Dawson Island, a little farther to the eastward, and the large islands of Hoste and Navarino on the south. Cape Horn itself is on one of the small islands on the southernmost part of the archipelago.

The chief island is Tierra del Fuego proper. It is half as big as Ohio, and now supports hundreds of thousands of sheep. The island is unequally divided between Chile and the Argentine Republic. Chile owns nearly all of the islands of the archipelago and most of the sheep lands of Tierra del Fuego proper. The

lands of the Chilean part have been taken up within the past few years under leases from the Chilean government. The Argentine portion is not so well settled, owing to the difficulty of access and the uncertainty as to the boundary. Still from what I can learn the Argentines have some of the best lands. Nearly all the southern and eastern portions of the island are plains, wide stretches of moorland, covered with grass, which in summer is green, but now in winter has turned a reddish brown. The other parts are made up of mountains, valleys, and plains. Around the west and south coast is a rim of mountains, many of which rise almost precipitously from the water, and which probably gave Darwin the basis for his statement that there was not a level acre of ground upon the whole island. The plains are in the interior. Running midway between north and south, and extending across the country, there is an elevated tableland and beyond this to the north is a second elevated plain.

The grasses of the plains are rich, but they are so largely eaten up by ground-rats that it takes from three to five acres to support a single sheep. The rats burrow in the earth, cutting it into holes like a prairie-dog town. They make it impossible to drive over the plains with a waggon, and horseback-riding has to be at a slow pace. Only cattle will drive the rats away, and they are used to tramp the ground for the purpose.

It seems strange to think of a dense vegetation in Tierra del Fuego. One might almost as soon believe that grass could be raised on an iceberg. The truth is, however, that the winter climate of Tierra del Fuego is milder than that of Canada. The lowlands are seldom covered with snow for more than a few days at a time, though you are in sight of snow and glaciers on the mountains all the year round. The climate varies in different parts, but it is generally cool, cloudy, and windy. The most objectionable feature is the wind, which at times blows for days at a stretch and sends the chilly air through one's bones in penetrating blasts. Tierra del Fuego is in the latitude of Labrador, but so is a large part of England and Holland; and I imagine that, barring these winds, "Tierra del," as they have nicknamed the island, has winters more like those of northern Europe than the winter of Labrador.

The vegetation is that of the temperate rather than of the frigid zone. The mountain slopes, up to about one thousand

feet, are walled with a growth of trees, ferns, and mosses so dense that it is almost impossible to get through the entanglement. On the sides of the steeper mountains the trees, instead of growing straight up, crawl upon the earth; so that a tree, with a trunk as thick as a man's waist, is not more than three feet high, but spreads over a large piece of ground. This is probably due to the mountain snow, which presses the trees down to the ground and still keeps them warm enough so as not to impede their growth.

And what kind of trees do they have down here at the tail end of creation? The most common is the beech. There are vast forests of antarctic beeches in Chilean Tierra del Fuego, the trees of which are eighty feet tall and six feet thick. They make excellent lumber, and some are now being cut down and shipped to Buenos Aires. One species of the beech tree is of our ever-green variety; another is a common beech like that of our Central States. There are also trees of the magnolia species. There are twenty-five different varieties of shrubs and bushes in Tierra del Fuego, besides wild gooseberries and wild raspberries. Wild strawberries of great size and delicious flavor are found in their season, and there are also wild grapes and wild celery. Ferns are to be seen almost everywhere; indeed, they seem to be indigenous in certain parts of the country. The sheep-farmers raise cabbages, potatoes, turnips, and peas in their gardens, and they tell me that in the spring and summer the pastures are dotted with wild flowers.

Tierra del Fuego has been called the "Klondike of South America." So far, however, there is no justification for the term. There is plenty of gold, no doubt; but as yet no large quantities have been discovered, and that found is difficult to mine. The gold is all placer gold; some of it is in the shape of nuggets as large as marrowfat peas, but the greater part is in leaflets or scales.

Most of the mines are in the southern part of Tierra del Fuego proper and the islands adjacent. The gold is found on the shores, the clay containing it running down under the water and being exposed only at low tide. The ground is covered with shingle and sand, which must be removed before bed-rock is reached. At the Slogget Bay diggings, for instance, there are six feet of sand and gravel above the bed-rock. This has to be

shovelled off, and at the next tide the gold-bearing clay is again covered. Almost similar conditions exist at the washings on the island of Navarino and elsewhere. From what I was able to learn there are, I should judge, only a few places where gold has been found in profitable deposits, and these are nothing in comparison with the great gold mines of our Western States. There are two or three companies now at work who use sluice boxes with machinery pumping the water from the sea and gathering the gold dust with mercury and copper plates. Most of the mining, however, is spasmodic and uncertain. The territory is exceedingly difficult to reach, and prospecting is coupled with such hardships and expense in the way of getting supplies that the American miner had better stay at home.

But let us look at the savages who live at the lower end of our hemisphere. I have already described the Alacalufs or Canoe Indians; they are found only on the waterways of the western part of the archipelago. Tierra del Fuego proper and the larger islands are inhabited by two tribes, each of which is different from any other Indian tribe of South America.

The Onas are found chiefly in northern and central Tierra del Fuego; they are very savage and wage war on the whites. Only a short time ago two Chilean naval officers were killed by them while surveying one of the smaller islands. When found the Chilenos were naked, their clothing having been stripped off, and in one of the bodies were found twenty-five arrows with glass heads.

The shepherds often shoot the Ona Indians at sight, for they say it is cheaper to kill than to civilize them. The Roman Catholics have a mission station on Dawson Island, not far from Tierra del Fuego, on which are some Onas, but most of the tribe are still wild. In their natural state the Onas go naked. When captured by the missionaries they may be induced to wear clothing, but one seldom meets with a brave who will not part with his suit of clothes for a plug of tobacco, or a squaw who would not, in a driving snowstorm, take off all she has on for a piece of red cloth or a string of bright beads.

In their wild state the Onas sometimes wear a strip of guanaco skin over the shoulders. The adults have breech cloths, but the children wear nothing save the coating of fish oil with which they are liberally smeared. The oil serves to keep out the cold;

and so far I have yet to see an Indian shiver, although in my winter flannels and overcoat I myself am none too warm. The Tierra del Fuegians have been painted by travellers as wretched and miserable in the extreme. They appear to be sleek, fat, and well-fed, and are generally good-natured. The Alacalufs I saw wore a perpetual grin, and the Onas and Yaghans are, when among themselves, full of good humor.

In travelling along the shores of Tierra del Fuego you stumble now and then over an Ona house. It is merely a hole in



AN ONAS FAMILY—TIERRA DEL FUEGO

the ground with a wind-break of branches or trees bent down and tied together over it. The hole is about three feet deep and just big enough to contain the Indian and his family. They use it chiefly at night, crawling in and cuddling up together with their dogs lying about and over them for warmth. Such fires as they make are for cooking, and are in front of and outside the dug-out sleeping-place. They do not like to stay more than a night or so in the same place, as they have an idea that the devil or evil spirit is after them, and that they must move on or he will catch them.

The Onas are of a good size, though not such giants as travellers have painted them. The men are usually about six feet tall, and the women about five feet, five inches. The Yaghans are much smaller, and the Alacalufs are between the two. Were it not for their stomachs, the Onas might be said to be well-formed. They are straight, deep-chested, and muscular. The women when young are plump and well-rounded, with fine necks and breasts. They are, however, great gluttons, and sometimes gorge themselves so that their stomachs are stretched out like drumheads, and extend out into pot-belliedness. They have lighter skins than our Indians and have high cheekbones, flat noses, straight, dark eyes, and rather full, sensuous lips. Their hair is straight and black, and among the men the fashion is to have it singed at the crown, forming a sort of tonsure. The women let their hair grow, and it hangs down over their shoulders. The men do not have beards until late in life, and as they do not like to appear old they usually pull out the stray hairs on their faces; an Ona seldom has a beard before he is thirty-five or forty.

The Onas apparently do not care whether their food is fresh or not. Before the advent of sheep-farming in Tierra del Fuego, they lived on fish, fungi, and guanacos. Guanacos are wild animals of the same genus as the llama. They seem to be a cross between the deer and the camel, and in size look like a very large sheep. The Onas run them down with their dogs and follow them also on foot. They are fast runners, and take steps—as an Argentine man who lived on the islands told me—six feet apart. When they kill more game than they can eat, they bury what is left over in the bed of a stream and come back a week or so later and eat it. This is especially so of the sheep they steal from the whites. They drive the sheep off in flocks of five hundred or more, get them well into the forest, and then have a big feast. They then break the legs of the remaining sheep and drown them in some deep stream, leaving them there until the chase by the farmers is over, when they go back for another but now well-rotted feed. They eat the decayed flesh of stranded whales which they find on the shore, but, as a rule, do not go out in canoes to fish as do the Yaghans and the Alacalufs. They also make traps to catch game. They use only bows and arrows in war and for hunting; the arrows used to be tipped with flint, but now they are pointed with pieces of

glass, made out of the broken whiskey and wine bottles thrown out by the steamers passing through the Strait of Magellan.

The Ona women weave very pretty rush baskets of a bowl shape. They cure the skins which their husbands bring in from the hunt, and sew them together with sinews into robes or rugs. The Onas, I am told, have no Great Spirit, or God, as our Indians have. They believe in polygamy, one man having several wives, which he buys of their fathers at as low a price as he can.

Before the whites came there were something like three thousand of the Yaghan Indians. They were described by sea captains as a healthy, hearty, naked, savage race. The English early established a mission in south Tierra del Fuego and persuaded them to put on clothes. It is claimed that with the wearing of clothes came consumption and pneumonia, and that these ailments have reduced their number to less than five hundred. The head of the mission among these Indians is the Rev. Thomas Bridges, who owns a big sheep-farm in the south. He has an Indian settlement where the people live in houses, and where they farm on a small scale. The information I gathered about the Yaghans I owe almost entirely to Mr. Bridges. He says they live in groups of about thirty families; they are not cannibals, as has been charged, and they do not eat raw meat. Their principal food consists of mollusks, fish, sea calves, birds, strawberries, and fungi. Their women cook these things in different ways; they cook birds by placing them on the coals and putting red-hot stones inside of them; they bake eggs by breaking a small hole in one end and then standing them upright in the embers before the fire, turning them round and round to make them cook evenly. They cook the blood of animals, but, as a rule, eat their vegetables raw. The women are both fishers and hunters. The men make the canoes, but the women paddle them; the latter are good at the oars and usually are better and more fearless swimmers than the men.

One of the wonderful things about the Yaghans is their language. With no means of writing, yet they have a vocabulary of about forty thousand words. Mr. Bridges, who has made a Yaghan-English dictionary, gives this as the number. The Eskimo use, it is said, less than ten thousand words, and Shakespeare's vocabulary, it is known, contained only twenty-four thousand words. The contrast, in the case of the Yaghans, is therefore remarkable.

CHAPTER XXXI

IN THE FALKLAND ISLANDS

JOHN BULL'S NEW NAVAL STATION IN THE SOUTH ATLANTIC—IT CONTROLS CAPE HORN AND THE STRAIT OF MAGELLAN—WHERE THE FALKLANDS ARE—THEIR VAST SHEEP-FARMS, WHICH ARE MANAGED BY SHEPHERDS ON HORSEBACK—A VISIT TO STANLEY, THE CAPITAL—TRAVELLING SCHOOLMASTERS—POSTAL SAVINGS BANKS AND OTHER FEATURES OF THE THRIFTIEST ISLAND COMMUNITY IN THE WORLD.

THE Falklands are among the little-known islands of the Atlantic Ocean, and yet they promise to become one of the news centres of the world. The islands form a crown colony of Great Britain, which is now planning to establish a naval and coaling station upon them. Such a station would command not only the passage around Cape Horn, but also the Atlantic entrance to the Strait of Magellan, the two great trade routes round South America, over which hundreds of millions of dollars' worth of freight passes annually.

The Falklands lie about 250 miles east of Cape Virgens, at the Atlantic entrance to the Magellans, less than a day's steaming for one of England's great war vessels. They are even nearer the track of ships going round Cape Horn. With the exception of Punta Arenas, which belongs to Chile, and which by the neutrality laws could not furnish coal except in times of peace, the only coaling port near the islands is at Montevideo, a thousand miles to the northward, the next nearest, perhaps, being the Cape of Good Hope, at the lower extremity of the African continent more than four thousand miles off.

The islands were discovered by an English commander named Davis, in 1592, and two years later were sighted by Sir Richard Hawkins, who named them the Maiden Islands in honor of Queen Elizabeth. Later on the Spanish government claimed them, and the Argentine Republic, as the heir of Spain, looked upon them as her property. In 1833 England again took possession of them,

and to-day, although Argentina disputes her title, she holds them fast.

I arrived at the Falklands from Punta Arenas on the steamer *Itauri* of the Kosmos line. The islands are so far off the regular routes of travel that tourists seldom visit them. The Kosmos line, although it is owned by Germans, has a subsidy from the English government to carry the mails, and it makes calls at Port Stanley, the capital, once every three weeks on its way to and from Hamburg and the west coast of South America. We



PENGUINS IN THE FALKLAND ISLANDS

were one day at sea, sighting the islands in the evening: we sailed all night along their bleak, bare, and rocky coasts, reaching Port Stanley in the morning.

The islands extend from west to east for about two hundred miles. There are two hundred of them, consisting of two large islands and many are so small that they do not even make appreciable dots on the map. Some of the smaller islands are inhabited only by penguins, there being so many of these birds that the governor of the Falklands has been called "the King of the Penguins."

The islands altogether have about two-thirds as much land as the State of Massachusetts, and East and West Falkland, the two larger islands, are about five times as large as Rhode Island. East Falkland, the larger island of the two, is 95 miles long and 40 miles broad and has an area of 3,000 square miles. It is the most settled of the islands, having the capital, Port Stanley, situated on an excellent harbour on its eastern shore. All of the larger islands are covered with sheep-farms, which are of such immense size that twenty-seven men, it is said, own the whole country. The total population is under 2,000, and over 1,900 of these work, in one way or another, for these twenty-seven men. The inhabitants are nearly all Scotchmen, and the islands are like a little slice of Scotland in the South Atlantic.

The pasturage of the islands comprises 2,325,000 acres. Upon this area more than 750,000 of the finest sheep in the world are feeding and from them \$500,000 worth of wool is exported every year. One company alone owns 240,000 sheep, and the man who owns less than 25,000 sheep is considered a small farmer indeed.

Outside of sheep-raising there are no other industries. There are only fifty pigs in the whole of the islands; and although the grass is good for cattle, there are but few in the Falklands. Not enough wheat is raised to make a Maryland biscuit, and the only signs of agriculture are the little garden patches of cabbages, potatoes, and turnips which one sees back of each of the houses of the shepherds on the moors, at the capital, and at the other small settlements scattered here and there over the two chief islands.

The Falklands are a very cave of Æolus. The cold winds blow almost all day long and every day; it is said, they sometimes blow the vegetables out of the ground. They blow so hard that not a tree can live, and to-day there are not enough bushes on the islands to furnish switches for a country school. The Governor told me that it was his ambition to raise at least one tree, and that he had already made several attempts, but in vain.

The pasture, however, grows luxuriantly, and the sheep keep fat, if the land is not overstocked. They breed so fast that tens of thousands of the older ones are killed and thrown into the sea every year, their skins only being saved. There is a curious grass on the islands, which is a tonic as well as a food for the

animals eating it. It is in fact a sort of a vegetable cocktail. It is called tussock grass, and has a stalk from four to six feet high and blades about seven feet long. The plants grow close together in bunches, as many as 250 roots springing from one plant. Animals eat the roots as well as the leaves, and feeding upon them fatten rapidly. The roots are even eaten by men, and it is said that two Americans once lived for fourteen months upon them on one of the smaller islands. The roots of the old plants decay and raise the grass upward, so that it grows upon a cushion of manure, as it were. Some of these cushions are six feet high and five feet in diameter, so that the grass springing from them makes them look from a distance like a grove of low palm trees. The tussock grass grows along the coast even down to high-water mark. It is fast disappearing, however, as the sheep are so fond of it that they eat it far down into the roots. Another odd plant which grows in the bogs looks like a stone. It forms bunches from three to eight feet tall and is as hard as a rock; indeed, it is so hard that one cannot cut it with a knife. On hot days a pale yellow gum comes out on its surface, and a rich aromatic odour fills the surrounding air. It is known as the balsam bog.

It is always cloudy in the Falklands. The air is moist, and nature is dreary in the extreme. Imagine a dull leaden sky hanging low over reddish-brown moors, out of which, here and there, jut the ragged teeth of white rock masses, and you have a general idea of the Falkland Island landscape. The islands are gently rolling, with here and there a ragged hill. The land is black, full of peat, and here and there is streaked with little streams and spotted with treacherous bogs, in which horses and men are sometimes lost. The ground is so soggy, in fact, that waggon cannot be used. There is not a four-wheeled vehicle in the whole country. Carts can be used only in Port Stanley. All travel is on horseback, and a stranger dare not go from one sheep farm to another without a guide. Such hauling as is done by the shepherds is on sledges dragged over the wet but snowless ground by horses. All herding of sheep is done upon horses and with shepherd dogs, which are raised and trained for the purpose.

Notwithstanding all this, the Falklands are excellent for the raising of cattle and sheep. The latitude is, roughly speaking,

the equivalent in the southern hemisphere of that of Holland in the northern hemisphere, and the animals feed out all the year round. Before sheep were introduced, the islands fairly swarmed with wild cattle and wild horses: about forty years ago it is estimated that there were 800,000 wild cattle on the island. Now these have all disappeared, though almost as many sheep have taken their places. The wild cattle occasioned the first settlement on the islands. In 1844, a rich cattle-and-hides-dealer of Montevideo, named Lafone, bought the right to the southern portion of East Falkland, together with all the wild cattle on the islands, for \$50,000 down and the promise to pay \$100,000 additional in ten years from 1852. In this deal he got over 600,000 acres of land, besides the skins of the wild cattle. In 1852, he sold to a company his property in the Falkland Islands for \$150,000, and since then this company has been the leading power in the Falklands. The company has bought more land, and it now probably owns more than 1,000,000 acres. It has about 300,000 sheep, and it has a sailing vessel which goes to London once a year to carry its wool and bring back the canned goods, clothes, sheep-farming implements, and other things required by the islands. It has a line of boats which periodically makes the round of the islands, carrying to the farmers such goods as they order, and bringing their wool to Stanley for shipment to Europe. The wool is put up in bales just as we bale cotton. Much of it goes to the markets by the regular steamers. That on which I came is now loading wool in the harbour. It will take on 1,200 bales of 650 pounds each, which, at ten cents a pound, the price it will bring in London, will make a cargo worth \$80,000.

It does not take many shepherds to care for the large flocks on the islands. The farms are divided up into fields of several thousand acres each and fenced with wire, so that all the shepherd has to do is to ride about among the sheep and take them out of the bogs when they fall in or turn them over if they fall down. They have to be clipped to keep off the scab, and at shearing time they are driven to the wool shed and shorn. The wool is not washed, but is carefully cut off, packed in bales of from six hundred to eight hundred pounds, covered with bagging, hooped with iron, and shipped thus to London for sale.

Most of the Falkland sheep are of the Cheviot and Australian breeds. They have heavy fleeces, the average being from eight to ten pounds, and running from that up to twenty-one pounds, the actual weight of a fleece recently sheared.

The life of the shepherds on the Falklands is a lonely one. Like the shepherds of Tierra del Fuego they are Scotchmen. Most of them are married, and all have large families. Their houses are scattered over the farms from fifteen to twenty miles apart; they are usually built near a peat bed and near a little inlet, where the company's boat can bring supplies. The wages are the same as in Patagonia, from \$25 to \$35 per month, including meat and fuel. The meat, of course, is mutton, and the fuel is peat, which the shepherd must dig for himself. In addition to this, he has a garden patch, and with mutton and vegetables he does very well. His flour and other necessary things he must buy. His home is a little cottage of two rooms and a lean-to, roofed with corrugated iron. One room serves as a kitchen and living room, and in the other the family sleep. If there is an overflow, or a guest should arrive, the loft, or attic, is also used as a bedroom. The cooking is done in a curious, oven-like pot, which is shelved under a grate set in the stone wall of a chimney or fireplace. The hot ashes from the burning peat fall down upon the pot and around it. The pot is tightly closed at the top, and it serves alike for boiling, baking, and stewing. The shepherd has mutton as a steady diet: he has mutton chops for breakfast, roast mutton for dinner, and a slice of cold mutton for lunch or supper.

The shepherds seldom leave their farms and the women often remain upon them for years at a time. I heard of one woman who had not been to town for eighteen years. Her last visit was when she came to Port Stanley to be married. Think of living away out on the dreariest moorland, under the dreariest sky, in a two-roomed cottage, with no neighbour within fifteen miles, and of coming into town only once in eighteen years!

You would think that the children brought up under such circumstances would be wild and uneducated. They are not. They are as intelligent and well-mannered children as you will find in any country community. They have a peculiar institution in the Falklands known as the travelling schoolmaster. He is paid by the Government, receiving about \$400 a year, to

go from one shepherd's house to another and teach the children. The time allotted to each family is a fortnight, and if three families can bring their children together they thus get six weeks of schooling. The schoolmaster lives two weeks with each family, and at the end of the time, having laid out a course of home study for the children, is sent on horseback by the shepherd to the next family, which may be twenty miles away. In the course of time he gets back to his old pupils, examines them in what they have gone over with their parents and sisters, and then takes them as much farther on the road to learning as his two weeks' stay will permit.

The bishop and parson of Port Stanley, who are also paid by the Government, make a tour of the islands once or twice a year to examine the children, not only in their catechism, but in their secular studies. These children are, however, from the best stock of the Highlands of Scotland. Their ancestors are among the thriftiest people in the world; indeed, many of the shepherds save money, and not a few have taken their savings to Patagonia and have there become sheep-owners themselves. There is not a beggar in the Falkland Islands to-day.

Still, the chances for poor men are not many. The good lands are all taken up, and nothing is for sale or for rent. Much of the land is held under twenty-one-year leases from the English Government, in blocks of 6,000 acres at the rental of \$100 per annum. It will be a long time before such leases will run out, and the value of the land is now so well known that the renewal of the leases will be at such prices as to leave little profit to the outsider. There is a very limited labour market in the Falklands; those who are employed get good pay, but the coming in of a hundred new hands would necessarily result in the discharge of so many men who now have work. The shepherds themselves have large families, and some of their children, when grown up, will have to go elsewhere to labour.

Let us take a look at Port Stanley, the capital of these islands. It has but 700 inhabitants, including the governor and his officials; but it has more business than many towns five times its size. It is perhaps the richest capital city in the world, for everyone of its inhabitants has all he can eat, and to spare. Port Stanley is situated on Stanley harbour, just beyond Cape Pembroke, at the eastern end of East Falkland. Its harbour is

a safe, landlocked bay, about half a mile wide and five miles long, with an entrance so narrow that a large vessel could hardly turn about in it.

On the south side of the harbour, running up a gently sloping hill, are a hundred or so neat one- and two-story cottages. They are made of wood or stone, with ridge roofs of corrugated iron. This is Port Stanley. As you look at it from the steamer, it resembles a German village, and as you come closer to it you find that every little house has its front yard and garden, and that the front doors of even the poorest of the cottages have vestibules. This is to shield the visitors and the families from the cold wind. In nearly every window you see potted plants and flowers, for they do not grow out of doors, and I venture to say that there is not a town of its size in the world that has so many greenhouses and conservatories.

By the side of each house is a pile of black cubes of peat, for peat forms the fuel of the town. It comes from the bog on the top of the hill, at the foot of which Port Stanley lies. Everyone here can get his own fuel for the digging, and nearly every householder in Port Stanley goes to the moor and chops out his own peat blocks for the winter.

Some of the houses are quite pretentious. The manager of The Falklands Company has a house containing a dozen rooms, and the cottages of the Governor cover perhaps a quarter of an acre, all of the rooms being on the ground floor. There are three churches, one of which is called the Cathedral (Church of England). This is presided over by the bishop of the Falklands. Another church is the Roman Catholic, and a third is that of the Baptist denomination. There are two hotels or public houses where you can get a bed or a drink. If you want the latter, you may have good Scotch whiskey for six cents a glass, and Bass's ale for four cents. There is a butcher shop which sells delicious mutton at four cents a pound, fairly good beef for eight cents a pound, and other things equally cheap. There is a plant on the islands called the tea plant whose leaves are used for tea; it has berries of a red rose colour. Celery grows wild. Penguin eggs, as big as goose eggs, are plentiful in season. They are delicious eating and cheap. Penguins themselves are such a drug in the market that they sometimes sell for \$1.50 per hundred. The waters about the islands are full of fish, but the

people eat mutton rather than undertake the labour of catching them.


Port Stanley has a post office, at which the monthly newspaper mail averages five pounds per family. It has a postal savings bank in which the deposits now amount to \$180,000. There are only 2,000 people in the Falklands, yet the depositors in the postal savings bank number 350. The colony has a Governor appointed by the Crown, who gets a salary of \$6,000 per annum, and it has other officials whose salaries foot up \$50,000 annually. It has an American consul, who is trying hard to earn his salary on these far-away islands, where there is no American trade, and where not a dozen American vessels call at the port in a century. The consulate is a little cottage of three rooms and a lean-to, such as could be built in the United States for \$100. It is one of the most useless consulates in our service, and there is no earthly reason for its existence except to give some politician a place.

S. A.—19

CHAPTER XXXII

THE ARGENTINE REPUBLIC

A BIRD'S-EYE VIEW OF THE COUNTRY—ITS VAST WHEAT-FIELDS, SUGAR PLANTATIONS, AND EXTENSIVE PASTURES—HOW IT COMPARES WITH THE UNITED STATES—ITS PEOPLE, AND THEIR CHARACTERISTICS—THE LATIN-AMERICAN AS A NATIONAL TYPE—HOW ARGENTINA IS GROWING—ITS RAILROADS AND TELEGRAPHS—ITS NORMAL SCHOOLS, FOUNDED BY YANKEE SCHOOL-TEACHERS.

CAME from Punta Arenas *via* the Falkland Islands to Montevideo, thence to Buenos Aires. I have now been several weeks in the Argentine Republic. The country amazes me: I expected to find it not unlike the United States. It is, however, as different as lemons are different from pumpkins. We have in the United States a booming country. Things also boom in the Argentine, but the character and conditions of prosperity are entirely different. We raise some wheat; so does the Argentine. We raise some wool; the Argentine raises more. We have the most land, but the Argentine has a territory which is almost all good for something, and in area it is at least one-third the size of our country, without Alaska and our new island possessions. The Argentine is longer from north to south than the United States. It is almost twice as long. If we could lift it up at the corners, turn it around and spread it upon the United States from east to west, placing the edge of Patagonia at New York, the borders of Brazil and Bolivia would be some distance beyond Salt Lake City. If we could cut it up into patchwork pieces and fit them upon our territory, every inch of the land east of the Mississippi would be covered, and the remnants would be larger than the area of several States west of that river. The Argentine Republic is twelve times as large as Great Britain. It is five times the size of France, and it is greater in area than the States of Mississippi, Louisiana, Texas, New Mexico, Arizona, California, Utah, Colorado, and Kansas

combined. This vast country is made up of mountain and plain, and its plains are among the largest in the world, extending from the hot lands of the tropics on the edge of Brazil to the cold, terraced pampas of southern Patagonia.

The best parts of the Argentine Republic have been built up by the great river systems which find their mouths in the Rio de la Plata. These rivers are the Uruguay, Paraguay, Pilcomayo, and Paraná: they form a vast drainage system which for ages has been carrying down the soil from the mountains and building up the country. They drain a territory larger than the basin of the Mississippi, a territory, in other words, as large as half of the entire United States.

The best soil of Argentina lies along the rivers. Most of the country is a great plain gently sloping in the northern and central part from the Andes to these streams. If you could see the Rio de la Plata, you would realize what a great earth-builder the river is. It is an immense river 100 miles wide at its mouth and 180 miles long to the point where it is formed by the junction of the Uruguay and the Paraná. It is so full of silt that it drops 10,000 tons of mud every hour. This is a mass so great that were it loaded upon two-horse waggons it would take a line of teams sixty miles long to carry it; it would require a solid line of such teams reaching from New York to Omaha to carry the droppings of one day.

I entered the Rio de la Plata on board the German steamer in which I sailed from the Falkland Islands to Montevideo. The waters of the Atlantic were stained by the mud long before we reached the mouth of the river. It took us all night to sail across it and in the morning we were still some distance from Montevideo. When I went to take my morning bath I found the tub filled with what looked like split pea soup, and when I let the fluid out there was in the bottom of the tub a sediment so thick that I left footprints quite as plain as those which frightened Robinson Crusoe in the sand of his desert island.

The sea captains tell me that these enormous deposits of mud are rapidly filling up the bed of the Rio de la Plata; its depth varies from 13 to 36 feet, but it has many banks and shoals. The silt has given it a bottom of fine sand. The large steamers that come to Buenos Aires often have to plough their way through the mud, and already the people are talking of a

jetty system, similar to that which Eads built at the mouth of the Mississippi.

The best idea of the Argentine Republic can be given by comparing it with parts of the United States. Take the valley of the Rio de la Plata as you find it about here and for hundreds of miles to the west and north of Buenos Aires. If you will imagine yourself in Illinois, south of Springfield, along the Ohio and the Mississippi rivers you will be in a country much like this. You must, however, cut out the cornfields, leave out the woods, and make the lands all pasture. Take away forty-nine farm houses out of every fifty, tear down all the barns, and in place of our neat country homes erect huts of mud and straw and bricks, sometimes thatched and sometimes roofed with galvanized iron. Then put here and there a larger group of low buildings surrounded by flowers and trees belonging to the rich proprietor, and you have the basin of the Rio de la Plata. You must dot the landscape with sheep and cattle, in flocks of thousands, and imagine vast fields, for a single farm often includes ten thousand acres, and one man may own many square miles of land.

Farther south, the Argentine is a tableland not unlike northern Nebraska. It is covered with sand and grass; streams twenty feet deep and eight feet wide cut their way through crumbling banks. The land rises in terraces from the sea to the Andes; the soil is poor, much of it being a sandy plain on which nothing will grow save by irrigation.

Again, going from the basin of the Rio de la Plata westward the land rises gently to the Province of Cordoba, one of the seats of the old civilization, and still farther west to Mendoza, in the foothills of the Andes. Cordoba is devoted largely to grazing. It has a mountain chain running through it, and is much like West Virginia, save that it is not wooded. The Province of Mendoza is on the plateau of the Andes. It is a grape and wine country, its vines producing a ton of grapes to the acre and a gallon of wine to every twenty vines. Its general character is like that of Pennsylvania in the region about Lancaster and York.

Going farther northward the scenery of Argentina changes. You now get into the tropics. The Province of Tucuman has rich sugar plantations; it produces ninety-five per cent of the sugar consumed in the Argentines. Its soil will yield a hundred

bushels of corn to the acre. Much of it is wooded with tropical trees. It is mountainous, having an average elevation equivalent to that of Denver and a general appearance much like the country along the Pennsylvania railroad at the Horse Shoe Bend. Here the streams are dry half the year and boiling torrents the remainder. The Tucuman valleys are hot summer and winter. Buenos Aires people go there to get away from the cold, a thing that seems ridiculous, for the city is never much colder than Savannah or Atlanta.

In addition to these sections there are other lands still nearer Bolivia, the Chaco and Formosa territories, for instance, which are heavily wooded; the inhabitants are half-naked Indians. This region has been little explored and is comparatively unknown. Farther west, in the Argentine Andes, is a country unlike anything in the United States. It is both mountainous and tropical. The timber disappears and mineral riches come to the surface. The finest of marble and the most beautiful onyx I have ever seen are to be found in this region. There are mountains rich in gold and silver, some of the mines of which are now being worked. The mining engineers of the Rothschilds and others are examining the deposits. The great drawbacks are the inaccessibility of the country, its lack of water, and the enormous cost of carrying mining machinery into it.

The wheat country of Argentina lies chiefly north of Buenos Aires and east of Cordoba, in the basin of the Paraná, and also in the province of Entre Rios, between the Uruguay and the Paraná rivers. This region, which is like Illinois along the Ohio river, is divided into comparatively small tracts, and is largely farmed by colonies of foreigners. Such is a bird's-eye view of the Argentine Republic: farther on I will fill out the picture.

Argentina has to-day a population of four millions, and is constantly growing. It has trebled within thirty years, and its people claim that it will have five millions in 1901, as over 100,000 immigrants come in every year. More than one-third of all the people in the country are foreigners, and seventy per cent of the foreigners are Italians. Eighteen per cent of the immigrants are Spanish and four per cent French: this makes ninety-two per cent of the immigrants of the Latin race: the remaining eight per cent is made up of British, Russians, Danes, and Swiss. Until lately there were so few Americans

that they were hardly worth considering. Now Americans of the better class are coming, and they will soon form an important factor in the Republic. The Portuguese as a rule do not stay, though the men of other nations remain. In a generation or so they marry Argentine girls and become Argentines; out of the whole is being evolved the Argentine type of the future.

The inhabitants of the Argentines are not like the South Americans of the west coast; they have no great strain of Indian blood in their veins; they are of almost pure European extraction. They are not Spanish, nor French, nor Italians, nor Anglo-Saxons: they are evolving a combination of all these, with the Latin strain predominating, just as in America we are forming a type with the Anglo-Saxon strain in the ascendancy. I think, however, that our type is superior to any that can be produced here.

The change in Argentina goes on rapidly. At the beginning of the present century the old families were Spanish and Portuguese. Since then they have been intermarrying with the English, Scotch, Germans, Americans, and Italians. This can be seen in the names of the distinguished Argentines: Admiral Brown, one of their famous naval officers, was of English extraction; the Livingston family, whose ladies are noted for their wealth and beauty, is in the fourth generation from the Livingstons of New York; Pelligrine, a former president, and one of the ablest men in the country, has English blood in him; the grandfather of the chief of police of Buenos Aires was an American; the father of Tornquist, another prominent Argentine, was a New Orleans man; and there are many leading families in whose veins flow rich strains of Irish or of Italian blood.

Already the Spanish type has been materially modified. Indeed, with its large percentage of foreign born, this country is to-day as cosmopolitan as any in the world. If one could be blindfolded, and on one of the magic carpets of fairyland in the twinkling of an eye be transported to the business parts of Buenos Aires, it would be impossible to tell where one was by looking at the faces or the dresses of the people. If you could be dropped into the stock-exchange, for instance, you might, if you were deaf, imagine yourself in New York or London; you could not imagine yourself in Buenos Aires. If your



ARGENTINE MAIDENS

ears were suddenly opened, you would still be at a loss; the cries of the brokers would be in Spanish, but from all around you would come a babel of Italian, French, and English. If you went outside, your situation would be even worse. You would hear the street-sweepers swearing at each other in Italian, English merchants discussing trade in Anglo-Saxon, and groups of Basques on every street corner gabbling at each other in Spanish. You would hear much French, and you might meet Russians, Poles, and even Turks.

This large mixture of foreigners keeps Argentina up to date. New ideas are coming in from everywhere and the latest improvements are to be found. Nearly all the large towns have electric lights, many have good streets, and there are excellent railroad connections with the leading centres. Argentina now has almost 10,000 miles of railroad, with a capital of more than half a billion of dollars. Buenos Aires has trains by which you can go to any of the larger cities in a night, and there are sleeping cars on all the lines. Buenos Aires is about as big as Boston. Rosario, the next city in size in the Republic, has a population of 150,000. You can go to bed in the cars in Buenos Aires and awake in Rosario. It is the same with Bahia Blanca, the metropolis of southern Argentina. The Tucuman trains have sleepers, and soon the traveller will be able to cross the continent *via* Argentina and Chile from the Atlantic to the Pacific without stepping from the cars.

The steamship accommodations are equally good. I came from Montevideo to Buenos Aires in a steamer much like those which run between New York and Boston. I retired at night on the vessel in Montevideo harbour, and awoke at the Buenos Aires docks. The fare was five dollars, and I think the Argentine steamers gave me more for the money than I get at home. I had a good stateroom; the ship was lighted by electric light, and it served an excellent dinner, with good claret and a button-hole bouquet without extra charge. In the morning the steward brought to my cabin a cup of coffee and a roll, and more than that, carried my baggage out to the customhouse. If I remember aright, the meals are charged extra on the New York and Boston boats.

There are several mail steamers plying weekly from Buenos Aires to Europe. There are others which go south through the

Strait of Magellan and about the west coast. There are ships, moreover, that will take you 2,000 miles into the heart of Brazil, and twice a week you may ride upon one up the Paraná to the capital of Paraguay.

Four thousand vessels engaged in foreign trade go in and out of the ports of the Argentine every year. The volume of imports and exports in 1896 amounted to more than \$227,000,000 in gold. One-fourth of this commerce was with Great Britain,



ENTRANCE TO DOCK No. 1 (BUENOS AIRES)

the country that does more than half of the whole ocean-carrying trade of Argentina. England sent forty per cent of the imports, Germany coming next, then Italy; after these came France and Belgium, and then the United States. In buying of Argentina, France comes first, Belgium second, England third, Germany fourth, and the United States fifth. Our purchases amount to about \$6,000,000 per annum, and our foreign trade is just about seven per cent of the whole. Nearly all the business is in foreign hands. The houses and companies handling the trade have capi-

tals amounting to hundreds of millions of dollars, and their establishments are run on business principles. The foreign banks alone have an aggregate capital of \$25,000,000, and I am told that nearly all of them pay large dividends.

The Argentinas are also progressive in an intellectual way. The government spends \$10,000,000 a year on its schools. It employs 8,000 teachers and has over 250,000 school children. There are a number of high schools, three universities, two schools of agriculture, a school of mines, and thirty-five normal schools. Both girls and boys attend these schools.

There are many women teachers in the Argentine Republic, some of whom came out from the United States years since to inaugurate the normal schools. When Sarmiento was president, a decade or so ago, he made a study of the public school systems of the world, and decided that that of the State of Michigan was the best. He imported a number of cultured Yankee schoolmarmes, and now the Argentine has first-class schoolmarmes of its own. Its normal schools, I am told, are producing more of the native variety than can be used, so that there is no opening here for additional American teachers.

The language used in the schools is Spanish—the language of the country. Everyone who has been in Argentina for a year or more speaks it, and the children, whatever their parents may be, lisp Spanish. There are private schools where not a word of Spanish is taught, but it is the language of the playground, nevertheless; and many a son of an English father and an Argentine mother can speak nothing else. Spanish is the language of the government, of business, and of society; though most Argentines can speak French, and not a few can converse fluently in Italian and English as well.

The chief literature to be found at the bookstores is that of France and Spain. There are also Italian, German, and English bookstores. The Argentine Republic reads the newspapers. Remember, its population, all told, is now not greater than that of the combined cities of New York and Philadelphia: still, it has 24 dailies, and 146 weeklies. Fifteen of the dailies are published in Buenos Aires, the leading one, "La Prensa," having a circulation of 70,000 copies; another, "The Diario," an evening paper, has a circulation of 30,000. There are three dailies published in English, and one of these "The Buenos Aires Herald,"

is edited and owned by an American: the other twelve are in Spanish, Italian, French, and German.

The people of the Argentines are letter writers, and they use the mails. It is estimated that 177,000,000 letters passed through their 1,400 post offices last year, and their postal revenue was \$30,000,000. There is a fair telegraph service under the government, and the telegraph lines, if linked together, would reach round the world.

CHAPTER XXXIII

BUENOS AIRES

THE METROPOLIS OF SOUTH AMERICA, AND THE LARGEST SPANISH-SPEAKING CITY IN THE WORLD—HOW IT CONTROLS ARGENTINA POLITICALLY, SOCIALLY, AND FINANCIALLY—BUENOS AIRES FROM THE HOUSETOPS—A TOWN OF SHREDS AND PATCHES—A LOOK AT ITS CHURCHES—THE LARGEST CATHOLIC CITY ON EARTH—A SOUTH AMERICAN BOTANY BAY.



BUENOS AIRES is at once the London, the New York, and the Paris of the Argentine Republic. It might almost be called the Argentine itself, for it controls the country as no other capital does the land which it is supposed to dominate. It is an old saying that Paris is France; she is not so much so as Buenos Aires is Argentina. There are a half-a-dozen cities in France that are independent commercial centres. Paris is by no means all France industrially, though she may be so artistically, socially, and intellectually. Buenos Aires is not only the political capital of Argentina; it is her commercial and industrial capital; her financial, social, and intellectual capital. Politically, most of the Argentine congressmen are citizens of Buenos Aires. Many of them who represent distant districts live in Buenos Aires the year round, although they may now and then go to visit their constituents. Many such are engaged in the professions, most of them being lawyers. Indeed, the Argentine Republic is made up of rotten boroughs represented by Buenos Aires men; the result is that when Buenos Aires takes snuff all Argentina sneezes.

Buenos Aires owns ninety-five per cent of the factories of the Republic: it has more than three hundred of these, employing over 12,000 hands. The great volume of foreign trade, now amounting to more than \$200,000,000 a year, passes through it. Its wholesale houses supply the Republic with goods. The Argentines, in fact, know of only two places—Buenos Aires and

the Camp: Buenos Aires is the capital city; the Camp is all of Argentina outside of Buenos Aires.

Commercially and financially, Buenos Aires is Argentina. In it are the banks that supply the Republic with money; wealthy institutions with fine buildings, and with deposits of from \$80,000,000 in silver down. It had at one time a bank with a capital of \$50,000,000, but this was closed by the failures which startled the financial world and made even the Baring Brothers, of London, totter, its depositors losing \$70,000,000 by its breaking.



BIRD'S-EYE VIEW OF BUENOS AIRES

Buenos Aires has its stock-exchange where "Argentinas" are bought and sold in parcels, and where stocks and bonds rise and fall as Buenos Aires thinks them good or bad. On this exchange more than \$500,000,000 worth of stock (in gold) was floated during the ten years preceding 1890. When the panic came, ninety per cent of the local companies failed, and now most of the shares are not worth one per cent of their face value. Nevertheless, both city and country are in a good financial condition.



BUENOS AIRES—RENDENA STREET

As a social centre also Buenos Aires is Argentina. Most of the money made in the camp (*i. e.*, the country) is spent here. The city has scores of millionaires, nabobs who each own their half-million acres of land, and who count their cattle and sheep in herds of thousands. They may go to their farms in summer, but their winters are spent in their Buenos Aires palaces, where they give royal entertainments and each season pay \$1,000 a piece for their boxes at the opera house.

All Argentina is increasing in population, but its most rapid growth is in Buenos Aires. The city is growing in numbers at the rate of 100,000 a year, and by the end of the century it is claimed that it will have a population of more than a million. One-fifth of all the people in Argentina live in Buenos Aires. The city grows like a green bay tree, and increases more rapidly than any city in the United States. Long ago it began to take in all available adjoining territory. When it had its great boom, just before the panic, it seemed as if the whole region about were laid out in lots; within five years the real estate transactions amounted to more than \$400,000,000. Enough land has been built upon to make a large city, and that a very solid one. The houses are not detached as ours are: they are built in blocks of four acres, each surrounded by narrow streets. Some of the sections are so crowded that in them the people swarm like bees. In others there are wide stretches of bare fields.

The city, as laid out, is eleven miles from end to end, and a ride around it is as long as from Washington to Baltimore. Within its boundaries there is twice as much ground as in Paris, and it has a greater number of stores and business establishments in proportion to its population than any town in the United States. You find stores everywhere; there are miles and miles of them. The reason is that there are few stores outside the limits. It has not the great suburban population of our cities whose wants are supplied by their home towns, but who come into the city to do business.

Buenos Aires is a Spanish city, and the biggest Spanish-speaking city in the world. It is almost twice as large as Madrid and three times the size of Barcelona. Its Spanish character, however, belongs to the past, and it is fast developing a municipal individuality of its own. It will, no doubt, always retain the Spanish language, but its people will be a mixture drawn from

the four quarters of the earth. To-day more than half of its citizens are foreign born and the city itself is fast losing much of its Spanish character. The houses on the new avenues, that have been recently erected, are more like those of Paris than Madrid. The Avenida de Mayo is a wide boulevard, with an asphalt pavement; the buildings upon it make one think of the Champs Élysée, and there is a total absence of the flat, low one-story structures of old Spain. It is the same with many of the business blocks that have been erected since Buenos Aires be-



AN AVENUE IN BUENOS AIRES

gan its rapid growth. Most of the buildings, however, are low. For a century or so there was not a two-story house in the city. The town was laid out in the Spanish style, in rectangular blocks along narrow streets. It was founded away back in 1535 by a Spanish freebooter, Pedro de Mendoza, who named it "Buenos Aires." The words mean "good air," but Mendoza did not name it thus because air here is especially good. It is not so, for the death-rate is high. More than a thousand people died here in the month preceding my visit, and the annual average of deaths is more than thirty-three to the thousand.

Just now the fog over the city is as thick as that of London. For a long time the air was so bad that lockjaw was almost epidemic. It takes a boy's bare feet and a rusty nail to produce lockjaw in the United States. Until recently one could catch it here by simply opening the mouth. No, Buenos Aires did not get its name from its abundant and life-supplying ozone. Like Cortez, Pizarro, and the other adventurous Spanish cut-throats of his time, Mendoza had a profound regard for the saints, and so he named the city after the Virgin Maria de Buenos Aires, whose aid he had invoked for his expedition before leaving Spain.

In the sixteenth and seventeenth centuries Asuncion, Paraguay, and Cordoba, a day's ride by train west of here, were far more ambitious towns than Buenos Aires. The latter long remained a settlement of mud huts, although lots three hundred and fifty yards front and three miles deep could be bought for a suit of old clothes. In the seventeenth century some of the central blocks of the city were sold for a white horse and a guitar. To-day the average value of land per square yard is over \$20 and the house property is said to be worth more than \$300,000,000 in gold.

When our Declaration of Independence was signed there were only 37,000 people in Argentina and only 3,000 in Buenos Aires. The colony, however, began to make money out of negroes and chiefly out of negro slaves. At that time the best families lived in thatched huts, but they ate their meals from dishes of solid silver, being waited upon by their own negroes. When John Quincy Adams was President, Buenos Aires had 22,000 people. During General Grant's first term in the White House it had less than 178,000, and when Cleveland began his second administration, its citizens numbered 535,000; while in 1899 it had 753,000. Its great growth has thus been within the past thirty years.

Buenos Aires is a curious city, made up of shreds and patches both as to architecture and to man. As to man, it has people of nearly every race: 300,000 of its residents are Italians, 90,000 are Spanish, about 30,000 French, and the remainder are Germans, English, or Argentines. The Argentines proper do not probably number over 150,000, and they are the only real citizens, in the sense that they vote and take part in the government. The others prefer to keep out of politics and the army, for the

foreign resident here has every property right that the citizen has, with none of his military obligations.

Most of the foreigners stick to their old nationalities, although some of them would not dare to go home to vote. The Argentine is one of the few countries that have no extradition treaties; criminals from everywhere have consequently taken advantage of this, and it is said that Buenos Aires has more men living under assumed names than any city in the world. This is especially so in regard to the emigrants from Italy, and also, until recently, in regard to not a few from our own country.

A year or so ago, it is said that four Americans were chatting together in one of the cafés of Buenos Aires, when three of the crowd for some reason began to jeer at the fourth. He grew angry and said: "Well, gentlemen, you may sneer at me if you please, but I want you to understand that there is at least one county in the United States that I dare go back to without fear of the sheriff. I know none of you can say as much." This, however, is rather hard on the Americans. Years ago, before we lost our merchant marine, our citizens were among the most prominent of the foreign residents of Buenos Aires, and those who have been coming in within recent years are men of high standing. Some have large interests, and at present the Americans, as a class, are much respected.

Architecturally, Buenos Aires is a patchwork city. I have rooms high up in one of its biggest hotels. The rooms are also high in price. They cost me eight Argentine dollars per day. I am on the fourth floor, and from my balcony I can see over most of the roofs of the city. Step out of the window with me and take a bird's-eye view of Buenos Aires. Below and about us lies a vast ragged plain of one and two-story houses, whose flat roofs are made of brick or brick tiles and occasionally of corrugated iron. Some of the buildings rise high above the others; the whole looks like a lot of great store-boxes jumbled together along narrow cañons, the streets. Away to the south you see a few smokestacks, the masts of ships, and some large warehouses; that is Barracas, where meat, wool, and hides are prepared for shipment to America and Europe. To the north there is a spot of green woods; that is Palermo Park, where society goes to ride and drive every afternoon; you may see a thousand carriages there at a time.

To the east, beyond that thicket of masts and spars lining the docks, extending on and on until they meet the horizon, are the muddy waters of the Rio de la Plata, which connect Buenos Aires with the outer world. The river here is twenty-eight miles wide; in the misty air we cannot just now see its opposite banks. Buenos Aires is only forty-eight feet above the waters of the Atlantic; back of and beyond the city extends the vast plain of the valley of the river, as rich here as is the valley of the Mississippi. It is cut up by railroads and dotted with farms, some of which support cattle and sheep in herds of thousands.



THE CATHEDRAL OF BUENOS AIRES

As you look more closely at the roofs below, you see that many of them surround little *patios* or courts. There are no gardens in front or behind the houses, and the masses here live without plants, flowers, or trees. There are no chimneys; the Argentines think it unhealthful to have fires in their living rooms, though one sees here and there a black stove-pipe coming up through the roof; but these pipes are connected with the kitchens, not with the parlours.

But what are the open spaces we see in the city of roofs? These are the plazas or parks, of which there are twelve in the city, varying in size from four to twelve acres. The one near the river is the Plaza de Mayo; it is the ecclesiastical, governmental, and financial centre of the city. Upon it face the cathedral, the president's house, congress, the courts, and the *bolsa* or stock-exchange. Into it run some of the chief business streets, and from it, to the westward, extends the Avenida de Mayo, the wide boulevard of which the people here are so proud, and at



PLAZA DE MAYO

the other end of which the future capitol building of the republic is to stand. The avenue has already cost \$10,000,000 in gold, and will eventually be one of the grand streets of the world. The section of the city through which it passes was in early Spanish days lighted with oil made of mare's grease; now electricity gives the same locality its illuminating rays.


The Plaza de Mayo covers eight acres; the finest building upon it is the cathedral, which looks more like a government structure or an art gallery than a church. It covers more than

an acre and will hold 9,000 people. It is, however, seldom full, although Buenos Aires is the largest Catholic city in the world. Ninety-six per cent of all the people in Argentina are Roman Catholics, but the men are not ardent churchgoers, and the women who worship at the cathedral do not usually fill it. There are in the city twenty-four other Catholic churches, besides four which are Protestant. Protestants are freely tolerated; one of their churches is the American Methodist Church, which is generally well attended, being situated within almost a stone's throw of the cathedral, in the business heart of the city.

CHAPTER XXXIV

HIGH LIFE IN ARGENTINA

HOW THE NABOBS OF BUENOS AIRES LOOK, ACT, AND LIVE—A NATION OF GAMBLERS WHO SPEND MILLIONS A YEAR ON RACES, LOTTERIES, AND THE STOCK-EXCHANGE—BEHIND THE SCENES AT THE CLUBS—A NIGHT AT THE OPERA—WELL-DRESSED WOMEN AND IMPUDENT YOUNG MEN—CURIOUS CUSTOMS OF COURTSHIP AND MARRIAGE—ODD FEATURES OF FAMILY LIFE.

IGH life in Buenos Aires! High life in the Paris of South America, where millionaires are thicker than blackberries in August and honey-lipped heiresses swarm like bees in midsummer! We may see it out driving in the park of Palermo, or meet it every afternoon on the Calle Florida. We may take chances with it every Sunday at the races, or we may stare at its diamonds every night during the opera season. If we have good introductions we may go inside its mansions and attend its fine dinners, or perhaps take part in a game at the Jockey Club, where fortunes often change hands in a night.

The races are one of the social institutions of the Argentine capital. The president and his cabinet, the officers of the army and navy, everyone, in fact, who pretends to be anybody, attends them, and this notwithstanding that they are always held on Sundays. The chief race track is owned by the Jockey Club. The club is the most celebrated in South America; its initiation fee is three times that of any club in New York, and its annual dues amount to a larger sum than many an Argentine young man earns in a year. Its club-house will compare favourably in furniture and finishings with almost any palace of Europe. The races are managed by this club, and all the money won and lost passes through its hands. The club takes a certain percentage of all the bets made, and when I tell you that last year more than \$13,000,000 were publicly wagered you can see that a small percentage gives the club a big income.

There are many fine horses in Argentina, and the races are usually well contested. The day I attended them eighty-seven horses were entered, and the grand stand contained more than ten thousand people. A building covering about half an acre was devoted to pool-selling, and a stream of men went to and from the windows of the building to make their bets or to receive their winnings. Every one was betting. Men, women, and children put their money on every race, and as the horses neared the winning-post the crowds in the grand stand went wild. Ten



PALM AVENUE, PALERMO

thousand people then rose to their feet, some climbing on the benches, and now and then a yell went up from many throats. The crowd was well dressed; it was composed of both men and women and of all classes. The choice seats were reserved for the members of the Jockey Club and their friends, and a cheaper section was patronized by the poor.

The Portefios, as the citizens of Buenos Aires are called, spend their Sunday afternoons up to three o'clock at the races. The races begin at 12 o'clock and end at 3 o'clock. At about

3:30 P. M. you will see the carriages leaving the race track for Palermo Park. This is a beautiful forest and garden, covering 850 acres, situated on the northern edge of the city, beyond the Recoleta cemetery and park, adjacent to one of the finest residence sections. It was formerly the estate of the dictator Rosas, who beautified it. It has fine drives, magnificent palm trees, and winding lakes, with here and there a café.

It is on Sundays and on Thursdays that all fashionable Buenos Aires comes to Palermo, and on some Sunday afternoons as many as a thousand carriages and ten thousand pedestrians are to be seen there at one time. Carriages are used by all classes. The people of the Latin races are fond of show, and the Spaniard, the Italian, and the Argentine of even moderate means will starve himself during the week in order that he may take a drive on Sunday. The rich are proud of their horses and carriages, and some of the turnouts, with coachmen and footmen in livery, are magnificent. The harness is often plated with silver and gold, and horses are of as choice a stock as you will find in Hyde Park or in the Bois de Boulogne. Young bloods sit on high drags and drive with gloved hands. On the backs of other vehicles you see stiff-backed little tigers sitting or gorgeously dressed footmen standing. Cavalry officers in uniform gallop by, and boys canter along on ponies.

At five o'clock on Sunday afternoons the crowd is the densest. It is then the height of the day at Palermo, and the sight is one for the gods and men, especially for men, for most of the carriages are open, and the majority of the women who sit in them are of that beautiful type which is seen at its best in Buenos Aires. Rosy faces, with luscious lips and large luminous eyes, look out at you from nearly every carriage that passes. The pictures are well framed. There are no dark mantas or head shawls, such as they have in Peru; there is no prudish modesty, no dropping of the eyes or blushing. These are live flesh-and-blood girls, not nuns. They are girls who are not afraid to look a man in the face and who are evidently able to care for themselves, although their fathers and mothers by Spanish custom keep them secluded. They do not walk alone on the streets, and one seldom sees them out of doors, except in carriages. They are, however, on dress parade every afternoon at the windows, and as you look up, if the street is clear, you may, perhaps, be rewarded with a smile.



Buenos Aires is a theatre-going city. It has twenty-six houses of amusement, at which its people spend in the neighbourhood of \$2,000,000 a year. The most fashionable of all is the Italian Opera, where the boxes for the season cost \$1,000 in silver and upward, and where some of the greatest singers of the world take part. The boxes are usually taken for the season, and an Argentine "swell" would rather sell his shirt and wear a "dickey" than give up his place in a box at the opera. The orchestra or pit is next in price to the boxes. A seat there costs sixteen dollars a night, or a little more than five dollars in gold, and the seats in the "peanut gallery" are as low as twenty-five cents.

During my last night at the opera the Italian star Tomagno sang in "Wilhelm Tell," but the audience interested me even more than the singing. There were, I should say, at least 3,000 people present, and every man and woman in the boxes and orchestra was in full dress. There was not a man in a business suit save in the upper galleries. The women were without bonnets, and most of them had on low-necked gowns, with arms bare, unless when covered with long white gloves reaching as far as the biceps. The dresses were more costly than those one sees at a White House reception. There were jewels everywhere. There was, I venture to say, a good half-peck of diamonds on the feminine part of the audience; diamonds as big as the end of my little finger hung from the lobes of pink ears, clusters of diamond flowers rested in beds of lace upon voluptuous bosoms, and combs set with diamonds fastened the well-groomed tresses of Argentine beauties on the crowns of their shapely heads. There were pearls as large as marrowfat peas, necklaces of them, joined at the centre with great rubies or emeralds. There were also sapphires and opals and gold galore.

Most of the women were pretty, representing as many varieties of complexion and feature as you will see at the Metropolitan Opera House in New York. I did not notice a predominance of the Spanish type; so many of the rich Argentine families have intermarried with foreigners that their women are as cosmopolitan in appearance as our own. Some of them were homely, and not a few, I say it with hesitation, owed much of their good looks to their make-up. Powder and paint are artistically used in Buenos Aires and there is no capital city where the professional

hairdressers and face enamellers have a better trade. I have been told that these people have their regular *clientèle* of rich women, who come regularly to be made up before they set out for their drive in the park or an evening at the opera. On opera nights you have to engage your enameller beforehand, or wait in the anteroom for hours before he will call out "Next."

However this may be, the effect at the opera is magnificent. The opera house in Buenos Aires is very large, the largest, I believe, in South America. It has five galleries, the lower three of which are of boxes. When the curtain is up the men behind the ladies in the boxes are practically out of sight, and from the pit where I sat in my sixteen-dollar seat, I could see above me the busts of the ladies resting as it seemed on the red plush railing of the galleries. There were hundreds of these busts running tier upon tier, making a flesh-and-blood beauty-show far superior to the London waxworks and well worth coming to Argentina to behold. In addition to the ordinary boxes, there is a special gallery in the opera house called the "cazuela," where ladies can come without escorts, and in which men are not allowed. Seats in this cost from two to five dollars each; and the gallery, I noticed, was well patronized.

The opera at Buenos Aires is rather a social event than a musical entertainment. I would fail if I attempted to describe the importance with which dress is regarded. In my simple American way I first thought of not going in evening dress, but fearing that my morning costume of black might possibly attract attention I put on an evening suit. It was warm, however, and I did not wear gloves. On entering the house I found that every man in the orchestra except myself had on "kids," and everyone carried in his hand a tall silk hat. Between the acts the men rose to their feet, clapped on their hats, and then sauntered to and fro through the house. Some stood at their seats with their opera glasses to their eyes and stared at the women, regardless of whether they knew them or not; but the greater part walked to the entrances to the aisles and stood there in knots, with their hats on, and feasted their eyes upon the women. It was a sort of cannibal feast, but the paint and enamel on most of the faces were so thick that it drew no blood to the surface.

And this brings me to a custom of the young dandies of the Argentine capital, who make a business of standing on the street

and greedily staring at ladies as they go by. In no other city does this rudeness prevail to such an extent as in Buenos Aires. It is most common on the Calle Florida, which is the Broadway or Regent Street of the Argentine capital. It is the fashionable shopping street, its stores being those of the chief jewellers, confectioners, milliners, tailors, and fashionable *restaurateurs*. The street has not more than twenty feet of roadway between its narrow sidewalks.

Every afternoon from four to six o'clock a line of carriages moves up one side of the Calle Florida and down the other. It may grow dark, but up to six p. m. the line is solid, and you may here see a thousand prancing horses moving to and fro. The carriages are usually open, and in them sit the most fashionable ladies of the city. They drive here every evening, merely because it is the fashion, and the young men stand on the street and stare at them as they pass. Every afternoon the Calle Florida is thronged with knots of young men who have come out for this purpose. They are well dressed and well groomed. They carry canes and wear gloves; they smoke cigarettes as they look about them. From time to time they make comments on the women who go by, and not infrequently say things which are absolutely indecent. Not long ago one of them ventured a remark to an American girl who was passing along the street. What he said was an insult, and the young American rewarded him with a slap across the mouth which almost knocked him to the ground. The ordinary Argentine girl would have pouted and passed on. Within the past year or so the Argentine police have been trying to stop this insulting of women, and now any woman who makes a complaint can have her insulter taken at once to the city authorities for trial.

We hear a good deal said of "Young America" and his impudence. The boys of Argentina are even more precocious than those of the United States. An Argentine father seldom whips his son, and the children generally have much more liberty south of the equator than north of it. The Sunday School is almost unknown, and the ordinary ideas of morality are so loose that children are brought up in a most pernicious way.

As to lying, this is common among men, women, and children. The polite lie is met with everywhere; it is even encour-

aged, and a father will sometimes say about his little girl or boy in admiring tones: "Why, hear that child lie!" or "How well it does lie"; "Why, I could not lie better than that myself." They have the Spanish ideas of honour. You might, for instance, call an Argentine a liar and he would think nothing of it; he might even consider it a compliment; but if you should call him a coward, he could not consistently rest until he had knocked you down or stabbed you under the fifth rib.

The young Argentines learn wickedness at a much younger age than our boys. Many of them have depraved minds at fifteen and they then begin to pose as men. Boys talk politics before they are out of knee-pants. Nearly every college has its political factions. The students organize revolts against the professors, thus training themselves to get up revolutions against the government when they grow older.

The well-to-do young Argentine is not brought up to any business. He has a prejudice against trade and work and wants a profession. It is the fashionable thing to study law and thus get the title of doctor, even though the young man may not expect to practice.

The Argentine children learn the languages easily, and many young men speak both French and English. The girls of the richer classes are usually good linguists, but outside the languages they know but little. I doubt whether you will find a score of young girls in Buenos Aires who have any such education as is given at our first-class women colleges.

As to family life, it is hard to learn much about that in the high circles of the Argentine. Each family is run as a close corporation, and when a son is married he usually brings his wife home, when sometimes an addition is built to the house, and the newly-married couple moves into it. The sexes are not kept apart as much as in other parts of South America before marriage. Still there is no such indiscriminate calling and courting as in the United States. If a young man pay any attentions to a young woman he is understood to mean business, and if he go to her house often a marriage proposal is expected to follow. When he calls he does not see his sweetheart alone, and he is not permitted to be with her unless the family or some part of it is present.

After marriage there is more freedom, but even then women are closely watched. I am told that wives are usually faithful to their husbands and that the percentage of good married women is greater in Buenos Aires than in many of the capitals of Europe. One seldom hears of a scandal in connection with a wife or a mother of a high Argentine family. The country is Catholic and there is no such thing as a divorce, although there are separations. The women are proud, and their regard for their children often keeps them from making a fuss about things which otherwise they could not pardon. As to the men, there are many good husbands, but there are not a few who have the Parisian idea of such things, and who seem to model their lives after that of the heroes of French novels. The percentage of illegitimate births is very high.

The women are the religious element of Buenos Aires. They maintain the churches, attend mass regularly, and manage all the charities of the country. One of the chief charitable organizations which they control is supplied with funds from the national lottery, a certain percentage of its receipts being given them. This lottery has drawings weekly and the sums realized are enormous. The women take charge of the profits and spend the money for charity. Such actions must have a bad effect upon the character of the people. You cannot make a child think that it is bad to gamble when his mother handles ill-gotten gains, no matter for what good object. The result is that the Argentines are a nation of gamblers, and Buenos Aires to-day is as badly affected by its lottery as was New Orleans when the Louisiana raffle was in operation.

There are drawings now every week, the grand prize at times being upwards of \$100,000 in silver, and at Christmas time \$1,000,000. Last year \$28,000,000 worth of lottery tickets were sold. There are lottery offices in every block; you meet lottery ticket peddlers on every corner, and one is not safe from them even at the doors of the churches.

Among the gambling institutions are the ball alleys, the races, and the stock-exchange. In the lotteries, the ball alleys, and on the race course, I see by a statement in a Buenos Aires paper, that \$47,000,000 were lost and won last year, while the sales at the stock-exchange footed up the enormous amount of \$436,-

000,000 in gold. The total foreign trade of Argentina during that year was less than \$120,000,000 in gold, showing that three-fourths of the business of the exchange was done on worthless paper. There is a great deal of private gambling in Buenos Aires. There are card tables at the clubs where a "hacienda" may be lost in a night, and there are many small gambling hells that carry on their business contrary to law under the very eyes of the police.

CHAPTER XXXV

LOW LIFE IN ARGENTINA

HOW THE POOR LIVE—THE CONVENTILLOS OF BUENOS AIRES, AND THEIR MISERABLE INHABITANTS—WORK, WAGES, AND TRADES UNIONS—THE CHANCES FOR WOMEN—STRANGE WAYS OF WASHING AND IRONING—AMONG THE GAUCHOS OR COWBOYS OF THE PAMPAS—A PEEP INTO THEIR HOMES—THEIR TERRIBLE DUELS—“I FEEL LIKE KILLING SOME ONE!”

THERE is low life as well as high life in the Argentine Republic. The poor are in the majority. Argentina has thousands of people who live in zinc sheds, and there are courts in Buenos Aires in which men, women, and children swarm as thickly as they do in any tenement section of New York or London. Rents are very high and only the rich are able to have houses to themselves. The well-to-do live in flats and apartments, and the poor are crowded into “conventillos.”

Conventillos are a peculiarity of Buenos Aires. They are immense buildings of one or two stories running around narrow passages or courts, and containing scores upon scores of one-roomed homes. Each room is the living place for one or more families, and in most cases it has so many inmates that the washing and cooking must be done outside in the court. These one-roomed homes are without ventilation, except from the front. They have no light but that which comes through the doorway, and their sanitary condition is beyond description bad.

You find conventillos in every part of Buenos Aires. They exist even under the shadow of the government mansions. Some are in the by-streets of the business sections, and there are others back of the palaces of nabobs, built against the houses of men whose incomes run into more dollars per week than many of the inhabitants of the conventillos receive in a year.

Take one, for instance, which I lately visited. It is situated under the shadow of the Grand Opera House. I had just come from the box-office, where I saw a score of men paying sixteen

dollars a seat for the night's entertainment, and where one man had paid down a thousand dollars for his family box for the season. The conventillo was entered by a door from the street. Passing through this, I came into a court, six feet wide and about two hundred feet long, walled with a two-story building of many rooms, each about twelve feet wide and not more than twelve feet deep. There was a gallery along the outside of the second story, and the two opposite walls were so close together that the stone-flagging of the court oozed with moisture. It received but little sun, and there was a damp, green mould on the stones not trodden by the tenants' feet. Opening upon the court from each room was a door, which furnished the only light and ventilation for the rooms. Just outside each room in the court was a bowl of charcoal which served as the cook-stove of the family within. Upon some of the fires rested pots of steaming soup, with ragged Italian women bending over them. In one doorway, there was a portly, gray-haired Indian dame cleaning a cabbage, and next to her I saw a lean Spanish woman cooking macaroni. Farther on, a girl mother, of perhaps fourteen, was washing clothes, while under the tub her dirty baby sprawled on the stone and squalled. Most of the people in the court were Italians, and many of the women were very young.

The Italians of Buenos Aires mature at an early age, and you may read any day in the papers the records of marriages of girls of fourteen. Large families are the rule, and several women of the court had, I was told, as many as ten children. Father and mother, grown-up sons and daughters, children and babies, all sleep in a space not over fifteen feet square. Many rooms have only one bed, which is occupied by the parents and as many children as can crowd in; the remainder of the family must sleep on the floor. There is no way of heating the rooms. They were all dirty and more like caves than the homes of human beings. Notwithstanding this, the children in them seemed healthy, although I heard one mother crooning away over a sick baby, her sad lullaby mingling with the strains of the singers who were practising a comic opera in the great theatre over the way.

The death-rate of Buenos Aires is not as high as that of some of the European cities. The climate of the Argentine is excellent, the last general census taken showing that there were then living two hundred and thirty-four persons who were over

a hundred years old. As I stated before, a large part of the population is made up of Italian, Spanish, and French immigrants, the Italians predominating. The latter have an annual birth rate of sixty per thousand, which is fifty per cent higher than the average birth-rate of Europe.

The real work of Argentina is done by the Italians and the Spaniards, furnished by the stream of immigrants which is always flowing to the lower parts of eastern South America. Within the past twenty-four years about 2,000,000 emigrants have been imported from southern Europe, and to-day out of the 4,000,000 people in the Argentine Republic it is estimated that more than one in every four is a foreigner.

Although the English furnish the money, the railroads are built by the Italians, and I am told they make splendid workmen. They are thrifty, economical, and generally happy. They send a large part of their wages back to Italy, just as our Irish do with their wages in the United States. The Italians are also the small farmers. They work the wheat lands, many of them taking tracts to farm on shares. They are, as a rule, thrifty and accumulative, and many who came here poor have amassed fortunes. The fact that an Italian lives in squalid quarters is not a sure sign that he is poor, for in these very conventillos, it is said that there are Italians who have nice little properties, but who prefer to save and starve now that they may be richer hereafter.

The Italians are the masons, the carpenters, and the mechanics of the Argentine. They are very apt at trades and will work for much lower wages than will the mechanics of the United States; moreover, they can live more cheaply than our people; many of them have but one real meal a day, which is eaten after they have dropped work in the evening. They take only a cup of tea and a piece of dry bread on rising, and this lasts them until dinner, although they may have another cup of tea at noon.

As to the markets, meats, with the exception of pork, are exceedingly cheap, but other things are high. Mutton brings almost nothing, and beef costs about half its value in the United States. Very little pork is used by the labouring classes. Most families buy their bread, as the poor have no facilities for baking. Licensed bakers supply the demand, and the bread-man on horseback, his horse's panniers filled with rolls, goes from house

to house daily. The bread of Buenos Aires is excellent. Cornmeal is not used, although hominy is a staple. Onions are every-



BREAD-VENDOR

where eaten, and a frequent sight on the streets is the onion peddler, who goes along carrying strings of onions, the bulbs being braided into straw so that they can be thrown over the two ends of a pole and thus carried across the shoulders. In the country the labourers live almost entirely on meat, and although they could have garden patches, they seldom care to undertake the trouble of attending to them.

The different classes of labourers have their own unions, but they do not often strike. I have been told by railroad men that they seldom have a difficulty with their employés. There is no great variation in wages from year to year, and so far strikes are almost unknown. Most of the employers prefer to get their work done as far as possible by contract or by the piece. This is especially so in railroad construction, where all excavation is done by the cubic yard. One man will hire a gang of men to help him, and he will be responsible to the contractors or to the officials.

Upon all the large "estancias" or farms the proprietor has a store from which he furnishes goods to his hands, deducting a

certain amount from their wages to pay for them. The railroads often carry provision cars with them and sell eatables and other goods to the workmen at a little over cost price; they furnish wine and clothes as well as all sorts of provisions, from London jam to hard-tack.

Neither in the country nor in the cities do the labouring classes seem to care as much for comforts as our labourers do. A galvanized iron shed forms the usual home of the farmer, and a quarter in a conventillo that of the city workman. An American mechanic would not live in this way, and I do not think he could make enough money here to enable him to buy the comforts he has at home. The Argentine labourer has to pay more for his clothing, and he has nothing like the educational or social advantages of his North-American brother. There is, in fact, no chance in South America for North-American labourers.

As to the women, those of the lower classes have a much poorer chance than in the United States. There are but few female clerks in the stores. Women are not generally employed in the government departments, and the female professional typewriter of the Argentine has yet to be born. In the government telegraph offices there are a few women operators, and at the "central" of the telephone there are girls to answer the calls. They are not "hello" girls, however. The Argentine man when he calls up "Central," yells out "oila" to get the young lady's attention, and often talks to her a moment before he begs her to have the graciousness to connect him with his butcher, baker, or candlestick maker.

There are a number of women teachers in the schools of the Argentine Republic. School-teaching is, perhaps, the most respectable profession a young woman can have. The normal schools are well equipped, possessing some of the finest buildings in the Republic. They are found to-day in nearly every province, and many young Argentine girls are being trained in them. The native Argentine women make excellent teachers, but there are not enough schools for them in the cities in which the normal colleges are located, and it is not considered proper for young women to go away from home to teach. The result is that most of them remain at home and stand in the door or lean out of the windows day after day gazing at the passers-by. This is the chief occupation of the middle-class girls of the Argentine cities.

The Argentine Republic is yet in its infancy as a manufacturing nation, and the females employed in its factories are comparatively few. There are some glove-makers, cap-makers, and umbrella-sewers, who are paid from fifty cents to a dollar of our money per day. There are some good seamstresses and milliners. In private families women are used as house servants, but about the hotels and boarding-houses all of the scrubbing and cleaning, besides much of the chamber work, is done by men.

Even the washerwoman of the Argentine has not the chance her sister labourer has in the United States. All families have



BUENOS AIRES—WASHING CLOTHES ON THE BEACH

their washing and ironing done out of the house; and it is customary for one set of women to do the washing and another to do the ironing. The washerwoman never irons and the ironer never washes. The corrugated zinc washboard is unknown; the clothes are usually taken to the banks of a stream and rubbed with the hands on flat stones or upon boards in the public wash-houses, where for a small sum per week a woman can get a place at the trough and the use of hot and cold water. There are many families who do nothing but iron, one woman employ-

ing from five to ten helpers, and paying each about fifty cents gold per day. The ironer usually arranges with his or her customers for both washing and ironing, and lets out the washing to the washers. The prices charged at the hotels are by the piece; I have to pay thirteen cents for linen shirts, ten cents for night shirts, three cents for handkerchiefs, and twenty cents per pair for pajamas. These prices are reduced to gold.

A discussion of the poor of the Argentines would be incomplete without mention of the "gaucho": the gaucho is the native Argentine of the country; he is the cowboy of the pampas, a



GAUCHO AND HIS HORSE—ARGENTINA

man whose counterpart is hardly to be found, a peculiar product of southern South America. The gaucho is a cross between the Spaniard and the Indian; if any part of his blood predominates it is that of the Indian, although the Spanish traits are always to be seen. The gaucho will not work in the cities; he will not farm, nor does he like to tend sheep, but he is at home on horseback, and is always ready to ride over the plains and to tend or drive cattle. He is a nomad, and prefers odd jobs to steady work.

You may see the gaucho anywhere outside of the cities, and wherever you see him he is the same. His complexion is usually of a light coffee colour. He is in fact the American Indian bleached, save that he has a full black and rather heavy beard. His eyes are coal black, bright and fierce, and his form is short and wiry. He dresses curiously; his black head is usually covered with an old skull cap, or a soft slouch hat. On the upper part of his body hangs a blanket, often striped in bright colours, through the centre of which his head is thrust. Another blanket is wound about his waist, pulled between the legs, and fastened at the back. Out of this lower blanket white drawers, often edged at the bottom with lace, extend down to his ankles, while bright red or blue slippers may cover his feet. He usually wears a belt of chamois leather, which may be decorated with silver buckles and bangles.

The gaucho is fond of silver and decorates the trappings of his horse with it when he possibly can. He has the best horse he can buy, steal, or borrow, and his saddle is often adorned with silver stirrups, while his bridle bit is sometimes silver-plated and usually of great size. He is never without a horse, although he may be a beggar, Argentina being one of the few countries where the beggars really go about on horseback.

You see the homes of the gauchos scattered over the pampas. Let me describe one. It is a mud hut, fifteen feet square, and so low that you have to stoop to enter the door. The floor is the earth, and there is no furniture except the skulls of bullocks, which are used for seats, and a table made of a board or two, which the gaucho has probably stolen from some rich landowner near by. The only table furniture to be seen is a couple of tin pans.

The gaucho does not need cooking utensils. He roasts his meat on a spit over the fire outside his door, basting it as he does so with the juice which he catches in the pan. When the roast is done he cuts it off a slice at a time. In eating he does not use a fork, but holds one end of the slice in his hand and clinches the other between his teeth, while he draws his knife across within one-sixteenth of an inch of his nose at every bite. His favourite dish is *carne con cuero*, which is meat cooked with the skin. The meat is wrapped up tightly in the skin, and thus cooked over the coals. The skin keeps in the juices, and the result is delicious.

The gaucho is hospitable. If you come to his hut he will take you in and give you the best he has, although he may intend to stab you in the back as soon as you have gone a few rods away. He cares little for blood-letting, and is always ready to fight. He is never without his knife, and is seldom backward in using it. Sometimes he acts like a demon, stabbing without cause. I heard of a gaucho who came along one day where a woman was working with her little boy beside her. As the gaucho saw the boy he said: "I feel like killing some one!" And with that he took up the boy and stabbed him. I heard of another gaucho who shot a boy with no more provocation. Neither of these men was hanged for the murders.


The gauchos often have duels, their favourite method of fighting being with knives. The duellists on some such occasions have their left legs tied together, each kneeling upon the right knee, so that they face each other. Each man is now given a poncho or blanket, which he throws over his left arm and uses as a guard, and a knife which he holds in his right hand. At a word from the principal the two men begin to stab at each other and they cut away until one or the other drops dead.

And do such men have wives and families? Yes, and they are said to be affectionate husbands and good fathers when sober, although often cruel when drunk. Almost all drink to excess at times; you see the little saloons kept up by their custom scattered everywhere over the pampas. They like to play billiards and gamble; nor do they think it wrong to cheat at cards; indeed, the man who can cheat without being found out is considered an excellent player. They make good soldiers, and I am told that many of the bravest men in the Argentine army have been gauchos.

CHAPTER XXXVI

ODD ARGENTINE CUSTOMS

THE HOSPITALITY OF THE PEOPLE—PRESENTS WITH STRINGS TO THEM—THE CEMETERIES AND FUNERAL CUSTOMS—HOW THE DEAD ARE FILED AWAY IN PIGEON-HOLES—RENTED GRAVES—CURIOUS GASTRONOMIC TASTES—SNAILS AND ARMADILLOS AS TIDBITS—THE GREATEST MEAT-EATERS IN THE WORLD—HOW TURKEYS ARE SOLD—MILKMEN WHO CANNOT WATER THEIR MILK.

HE Argentines are generous, after the Spanish style. That is, they will make you a grandiloquent presentation of anything you admire, expecting that you will politely refuse to accept. This is the custom of all Spanish-America. At Santiago I dined one day with a millionaire friend of the President of Chile, a gentleman of high education and culture; the dinner was given at his home in the suburbs of Santiago, a palace surrounded by a garden conceded to be one of the finest in South America. As I walked through the house with its owner I could not help but admire it. He at once offered it to me, and that in such a cordial manner that I feared for a moment he might be in earnest. When I reflected, however, that the property would bring at auction at least \$100,000, I felt there might be a mistake, and refused it with thanks.

This habit sometimes causes the giver trouble when he has social relations with a foreigner who does not understand him. Not long ago a Spanish don was travelling down the west coast of South America on a steamer with a charming young American girl as a fellow-passenger. The don was married, but the young lady was beautiful, and when she admired a poodle which he was carrying with him, he at once placed it at her disposal, bowed to the floor, and told her it was hers. He expected that she would thank him and refuse; but to his surprise she thanked him and accepted the gift. Now the don was carrying this poodle to his wife, who was as jealous as Spanish women usually

are. He had especial orders to bring it home safe and sound, and as the American girl was going to the same town, he knew that serious complications would arise if he did not recover the dog. Before he left the ship he was compelled to ask one of his friends to explain to the young lady that his offer was not intended to be taken in earnest, and that he hoped she would send back the poodle, as it belonged to his wife.

I have heard of many similar incidents of the failure of such polite lies and cheap generosity. One relates to a young naval lieutenant who has since risen to be an eminent officer on one of our American men-of-war. It was during his salad days when he was in South America on a coasting tour that he became acquainted with an Argentine don. One day he asked the latter for a match, and was handed in reply a beautiful gold cigar-lighter. The lighter must have been an expensive one, for it was set with diamonds. Our young lieutenant admired it, and the don, putting his hand across his heart, told him it was his and at his disposal. The young lieutenant, then green to Spanish ways, as grandiloquently accepted it, and the Argentine don was too amazed to explain. At least, he never asked that it be returned, and I dare say the American naval officer has it among his trophies to-day.

Some of the oddest customs of the Argentines are those relating to the dead. In the lands of the Rio de la Plata funerals are grand functions, and the average funeral costs more than a wedding. The undertakers advertise their wares as our merchants advertise their dry goods. Each undertaker gives his prices; he tells you just what you can get for your money; he lauds his peculiar burial caskets, and the virtues of his patent embalming fluids, and states that he can take charge of the departure of the deceased with all fashionable accompaniments.

Funerals are first, second, and third class; the first class are worth seeing. I shall never forget one which passed me in the business section of Buenos Aires. It was the funeral of a steamship manager, who had evidently been a man of wealth. The hearse was as big as a baggage waggon, and the four black Orloff stallions which drew it were as fine as any in St. Petersburg. The hearse consisted of a black canopy resting on wheels; at its corners were massive bunches of ostrich feathers, each as big around as a half-bushel measure. The roof was upheld by four

black Ethiopians, made of carved ebony, and the magnificent coffin, which rested on the platform beneath, was covered with flowers. On the front of the hearse sat a coachman dressed in black, and on the back a footman in the same sombre livery. Each of the coaches following the hearse was drawn by black horses and driven by coachmen in mourning. The mourners were dressed in black, all wearing tall hats and black gloves. It was indeed a parade of grief.

An important part of the advertising of the Argentine newspapers relates to funerals. The family always inserts a statement of a death and an invitation to its friends to be present at the funeral. They announce the masses, which are given from year to year on the anniversaries of the funeral thereafter, and which all friends of the deceased and his family are supposed to attend or to leave their cards at the church door. Here is a sample funeral notice:

NICOLAS I— G—, Q.E.P.D. Died June 22, 1892.

The family invites the persons of their friendship to attend the masses, which, for the eternal rest of his soul, will be celebrated in the Church of San Miguel Wednesday, the 22nd of June, 1898, from 8 to 10 A. M. The family will assist at the mass at 10 o'clock.

In response to the notice, all the friends and relatives of the family were expected to attend. There were servants at the church to receive their cards as they went in, and those who could not go in person sent cards. As soon as the family got back from mass they probably looked over the cards, and the person who had slighted the deceased, though dead six years, undoubtedly incurred the resentment of the family. Every Argentine scans the newspapers that he may keep track of the masses said for his dead friends and the deceased relatives of his friends that still live. The Argentines respect funerals. Everyone takes off his hat, and reverently waits until the hearse passes, and it is etiquette to bare your head when passing a house that has crape on the door.

There are fine cemeteries in all of the Argentine cities. Buenos Aires has 230 acres of them, not a large area as compared with some of our cemeteries, but big enough when it is considered how South American cemeteries are built. The cities of the dead in South America are genuine cities in which the

deceased are as closely packed and crowded as are the living in a New York flat. The cemeteries have their paved streets, their narrow courts, and even their tenement vaults, where the poorer dead are laid away to rest for so much per year for a season.

I have as yet, however, seen no cemetery so crowded as the Recoleta, the fashionable burial-place of Buenos Aires. It covers thirteen acres and contains more than 200,000 inhabitants. There are enough corpses in it to cover the ground two feet deep without crowding, and there is a high stone wall about it strong enough, I hope, to keep their ghosts in. Inside this wall there is a central street or avenue, paved with marble, cutting the cemetery in two. As you walk up this you find at the centre a place where eight other streets branch off at right angles. All of these streets are paved with marble or mosaic; and they are again cut by smaller streets dividing the cemetery into a great number of blocks.

In looking over this beautiful city of the dead you notice that the houses resemble those of a city of the living. They are of all sizes and conditions, small and big, grand and mean; the palaces of the rich and the tenements of the poor. Each house is a vault, and contains from one to many hundreds of inmates. Some of the houses are in blocks, marble structures from eight to fifteen feet high and from eight to ten feet wide, each the property of one family. Some stand alone with only a crack between their walls and those of the adjoining vaults.

All have but one room that can be seen, and this room is in most cases of the same shape, although furnished in different degrees of magnificence and taste. It might be called the chapel of the dead. It is four or more feet square, and five feet high, and is entered by a door at the level of the street. At the back there is a marble slab or table set in the wall and upon this sometimes a coffin rests. The slab is covered with a lambrequin of fine lace, and in its centre stands a crucifix with the dying Christ upon it, or perhaps a waxen image of Mary the Mother of our Lord. Upon some altars are silver candlesticks, while above many lamps burn incense from one year's end to the other. On the marble floor there are flowers, sometimes real, in the shape of growing plants, sometimes bouquets placed there fresh for the day, and again artificial flowers and immortelles made to last for years. The doors of the houses are often plate glass. All have

locks, and not a few have padlocks. Many have lace curtains, and most are covered with gratings of iron curiously wrought.

But where are the inhabitants of these houses? God knows, I can only show you where their decayed bodies are. Come with me to the cemetery. Through the grating in the floor of that vault which has been opened to admit a corpse, you can see steps which lead below. Here the proprietor and his family sleep in the basement. Their beds are those coffins resting on the shelves fastened one above another to that brick wall, keeping them in death as in life together, while their friends who are still living make their offerings and their prayers above. I don't know but that this is better than our way. These people lie here and dry up within their vaults; we are usually planted in the earth to give the worms a feast.

In times of epidemics the Argentines bury their dead with lime to aid decomposition. The southern cemetery of Buenos Aires was opened during the cholera epidemic of 1869 and closed after the yellow fever epidemic of 1871. Well, in this time, it received twenty-two hundred corpses, which were cremated by spreading upon them two hundred tons of quicklime.

There are many curious things to be seen in Buenos Aires markets. There are all kinds of vegetables and meats, quantities of juicy snails, and hundreds of young armadillos. Armadillos are among the delicacies of Argentina. The armadillo is a toothless mammal peculiar to South America, about as large as a number eight derby hat, looking not unlike a turtle, save that its back is more rounded and is divided into plates or belts like a coat of mail. It has feet with claws, and a little head shaped like that of a pig. It lives on fruits and roots, burrowing in the earth and seldom going out except in the daytime. Its flesh tastes like young chicken.

The Argentines are the chief meat-eaters of the world. Outside the cities the people live on mutton and beef, and any day they would gladly trade you a pound of meat for a pound of bread. In Buenos Aires the annual consumption is 274 pounds of meat per inhabitant, or, counting five to the family, 1,370 pounds per family. This is the highest average of any city in the world.

The Argentines are very fond of fowl. It is estimated that 90,000 hens, 77,000 roosters, 12,000 turkeys, and more than 60,000

brace of partridge were eaten in Buenos Aires last month. Live chickens are peddled by hucksters, who carry the fowls in wicker crates slung over the back of a horse, from house to house. Turkeys are driven through the streets by peddlers; you pick out the turkey you want from the flock and the owner will catch it for you. Fish and vegetables are sold by men who carry them through the city in baskets hung to the ends of poles suspended from their shoulders.


The milk peddler on horseback has been driven from the main part of Buenos Aires and his place taken by the dairy companies that now furnish good butter and milk on almost every street. Until within a few years ago butter was not to be had in Buenos Aires; the country had millions of cows, but not a score of good butter-makers. Farmers who owned 10,000 cows imported their butter in tins from the United States or Europe, and a great deal came to Buenos Aires from New York in firkins. A few years ago an enterprising Argentine established a large dairy outside the city. He imported butter-makers from Switzerland, and now the city has as delicious butter as can be found anywhere. The butter is made without salt; I am told that sweet cream is used, but it is so good that you can eat it like cheese. It is sent to Brazil and other countries, and even shipped to London.

The former milkmen carried their milk from house to house in cans swung to the sides of a horse. Each can was closed at the top with a piece of wood, about which an old cloth was wrapped to keep it tight. This made the milk so foul and insanitary that the government objected to it. Milkmen still drive their cows from house to house in all towns outside of Buenos Aires. They milk the cows for you while you wait, and there is no possibility of them selling chalk and water for the pure extract. Each cow has its calf with it, but the calf's mouth is protected by a leather muzzle, so that, Tantalus-like, it is ever within the sight and smell of the milk, without a chance to satisfy its hunger and thirst.

CHAPTER XXXVII

THE WHEAT-FIELDS OF ARGENTINA

WHERE THEY ARE, AND WHAT THEY ARE—HOW THE GRAIN IS RAISED AND MARK-
KETED—THE WHEAT FARMERS ARE ITALIANS, WHO LIVE IN MUD HUTS—
ROSARIO, THE CHICAGO OF SOUTH AMERICA—THE LOCUSTS THAT COME
FROM BRAZIL IN SWARMS AND EAT UP THE WHEAT—HOW THEY ARE DE-
STROYED—THE FUTURE OF WHEAT-RAISING IN SOUTH AMERICA, AND ITS
PROBABLE COMPETITION WITH THE UNITED STATES.

 ROSARIO is the Chicago of South America. It is the chief wheat-market of the Argentine Republic. It is situated on the Paraná river, about 200 miles by land from Buenos Aires, at such a point that ocean steamers can sail up to its wharves and load for Europe. It is about as far inland from the Atlantic ocean as Pittsburg, but the Rio de la Plata and Paraná rivers are so deep that steamers drawing sixteen feet of water can reach the city at any time of the year.

Rosario has become important only since the wheat-fields have been developed. It was founded in 1725, but until a generation ago was an obscure village; now it is the second city in Argentina. It grows faster than New York, and within the past ten years has doubled its population, having now about 150,000 inhabitants. It is well built, the streets crossing one another at right angles. It has daily newspapers, electric lights, telephones, and banks, and has recently been building up a large foreign trade, especially in the export of wheat.

Rosario is so located that the grain can there be loaded on the steamers more cheaply perhaps than in any other city in the world. The Paraná river has cut its channel down into the soil to such a depth that the bluffs upon which Rosario stands are about seventy feet high. The bluffs are precipitous, so that the warehouses which line them are higher than the masts of the steamers floating on the river. The wheat can therefore be transferred from the bluffs to the steamers by gravity. Each warehouse has

a long chute running from the edge of the bluffs down to the river. The chute is made in sections, and is so arranged that it forms a trough from the bluffs right into the hold of the steamer, and so constructed that it can be lengthened and shortened at will.

The wheat is bagged at the farms: the cars carry it to the edge of the bluffs, and Italian labourers take the bags and lower them by means of the chutes. As soon as a bag touches the chute it begins to descend and speeds down the inclined trough



SOCIAL GATHERING, ARGENTINE FARM HOUSE

into the steamer. The bags fly down one after the other in lively succession. At harvest time the wheat often becomes congested at Rosario; the railroads have more than they can do to carry the crop, and almost all other traffic has to be suspended. There is no such system of interchange of cars as we have in the United States. One company's cars cannot go over the tracks of another: the result is that the wheat is piled up in bags at the stations and left there until it can be shipped. I saw many such piles in different parts of Argentina. As there

are no barns and as yet comparatively few elevators, the marketing of wheat is conducted on the most wasteful methods. The weather is such that nearly all the stock feeds out of doors the year round, only the finest of blooded animals being kept under cover. Even the working-animals are not fed, but have to rely upon what they can eat in the pasture fields. The result is that there is no chance for the farmer to store his wheat in barns, and he has to depend on the railroads to get it to the markets. The land is level, and there are no grades to speak of, so the freight rates should be low.

I believe wheat-raising in Argentina is still in its infancy. Twenty years ago the wise said that grain could never be grown in the region to any extent. The Argentines were then importing millions of dollars' worth of wheat every year, and the farmers who were pasturing stock on what are now the principal wheat-fields were eating flour shipped from the United States and Chile. To-day, Argentina commands to a large extent the wheat trade of South America. It plants 3,000,000 acres every year, and it produces from 30,000,000 to 80,000,000 bushels a season, according to the weather and the invasions of the locusts. For the last seven or eight years it has produced from three-fifths to four-fifths of the wheat crop of this continent, and to-day it is shipping wheat to the different parts of South America as well as to Europe. When the Argentine has a good crop the prices of wheat in the European markets are affected and our farmers get less for their wheat in consequence. Within the past year or so flour mills have been springing up, and the Argentine has now more than 500 flour mills, many of which are using machinery imported from the United States. I had as fine bread for my breakfast in Buenos Aires as one can get at any hotel in New York, and as a rule the flour is as good as any we produce. A great deal of Argentine flour is shipped to Brazil and Uruguay, and some is annually sent to Europe.

The grain-producing area of Argentina increases every year. For a long time it was confined to the valleys of the Paraná and Uruguay rivers, the only regions in which it was supposed wheat could be grown. Year by year, however, the farms have been pushed farther back, and now wheat is grown on an area as large as that of England and France combined. It is said that if all the Argentine land known to be good wheat land should

be put under cultivation and it should produce an average of only ten bushels per acre, the total crop would equal one-half the annual wheat-yield of the world. The available wheat land is estimated at 240,000,000 acres, but of this only about six per cent is at present under cultivation.

A new wheat region is that of the south. The Argentine Republic is longer than the United States. I have gained a practical knowledge of its extent during the past few months, for I have been away down in Patagonia. I have travelled thousands of miles through tillable ground which has never been touched by the plough. Nearly 300 miles south of Buenos Aires there is a thriving seaport, called Bahia Blanca. There are big wheat warehouses there, and the railroad men tell me that they have more wheat than they can well handle. This wheat comes from the southern part of the province of Buenos Aires, a region enormous in extent and almost all of it good land.

Just south of this region there are vast pampas having scanty pasturage, which are usually looked upon as deserts. Through these pampas run the two great rivers, the Rio Colorado and the Rio Negro, or, in other words, the Red and the Black rivers. I travelled for days along these rivers in company with a party of railroad surveyors. The rivers are large all the year round, and their fall is such as to make irrigation possible for a wide distance along them from the Andes to the sea. In the future they will be bordered with irrigated wheat-farms, for the land is as rich as in any part of Colorado, Utah, or California, and its settlement and use is only a question of a few years. Already the Welsh, who have a colony much farther south, are growing wheat by irrigation; they are now exporting about 5,000 tons a year, and this has all been grown on what until now was called the desert sands of Patagonia.

About Rosario and elsewhere in the valley of the Paraná the soil is a rich, black loam from six inches to three feet deep, lying on a bed of clay. All the country for hundreds of miles above and below Rosario, comprising large parts of the provinces of Buenos Aires, Santa Fé, and Entre Rios, is composed of this soil, which is good for wheat cultivation.

I have never seen such poor farming anywhere as that of the Argentines: our own farmers are bad enough, but those of the Argentines are infinitely worse. In the United States the average

yield of wheat per acre, taking in the entire country, is from twelve to thirteen bushels; that of the Argentine is not over ten. In England, where the soil is more carefully studied and cared for, the average is twenty-nine bushels per acre, in Holland twenty-five bushels, and in France eighteen.

Most of the wheat of Argentina is raised by Italian immigrants, many of whom farm the land on shares. They do their work in the most slovenly way. Much of the wheat is sowed on the ground as it is first ploughed, the grain being dropped



ARGENTINA FARM HOUSE

among the clods. Other farmers drag brush over the fields, and some of the better farmers use harrows. The ploughing is done with bullocks, which drag the ploughs through the furrows by means of a yoke attached to their horns. No fertilizer whatever is used, and the farmers' only idea seems to be to get the wheat into the ground and then sit down and wait for the crop.

The life of the Argentine farmer would never suit our people, and no American could be happy here unless he brought his friends and associates along with him. I cannot describe the dreariness of the life. In most of the wheat countries there are

no trees. The little mud hut of the farmer stands out alone on the dreary landscape. It has not a sign of comfort, and but seldom has a garden. The farmers have to buy everything; they run accounts at the nearest grocery and make annual settlements when they sell their wheat. Most of them drink to excess, and few have any thought beyond the prospects and the returns of the wheat crop. All have large families, and at the times of planting and harvesting all of them work. You may see boys of eight riding horses in the field and girls of nine and ten doing their share of the harvest. The lack of elevators and other conditions demand that the wheat should be quickly gathered and threshed; and at harvest time you will not find a harder-worked people anywhere than these farmers. Women and girls, men and boys, labour with all their might from sunrise to sunset; even when it is moonlight you may see them out under the stars binding and threshing wheat. It is the same in planting time, but between the seasons there is a long vacation.

The result of dependence upon wheat alone is that the failure of a crop means partial starvation. There is no reason for this, for the land is susceptible of growing a variety of things and, as ploughing can be done in every month of the year, the Argentine farmer could raise everything he uses. As it is, it is said that he can now produce wheat at a cost of from twenty-five to thirty cents a bushel. This may be so, but taking the average of good crops and bad crops, it is probable that wheat costs as much in Argentina as in the United States.

It is curious to see how the wheat is carried to the cars. It is hauled in bullock carts on wheels about eight feet high. A load, weighing several tons, is balanced between two of these wheels, and from a dozen to sixteen bullocks are harnessed in double file in front of it. As the cart moves onward over the rough road the wheels give out such a screeching that you think there must be a hog-killing near by. If you tell the farmer that a bit of grease on the axles would stop the noise, he replies that it is a necessary evil, and that the bullocks will not move unless they hear it. Upon some of the large farms modern machinery is used to put in the crops and all threshing is commonly done with European or American threshers.

Argentina is frequently subject to droughts, and the wheat-yield is great or small according to the weather. It is even

more affected by the locusts, which are by all odds the worst pests of the Argentine farmer. The locust invasions, in fact, equal in their destructive tendencies the locust plague with which the Lord afflicted Pharaoh. The only difference is that Pharaoh had his locusts for a few days, but the Argentines seem to be having theirs as a regular thing. The plague does not extend to the south; but for the past seven years the wheat farms of the Paraná valley have been seriously damaged by it.

Many people believe that the number of locusts will increase from year to year, and that the country can never be free from them. They argue this from the location of Argentina. Situated as it is in the temperate zone, it has a delightful climate and a fairly good soil. Just north of it lies Brazil, which is covered with tropical vegetation, and vast areas of which will never be different from what they are now. In that country, it is claimed, the locusts have their breeding-grounds. They are produced by the million there every year, and as a swarm thinks nothing of a flight of 500 miles, it will be seen that an army starting out for plunder is a dangerous enemy. It is said that the locusts annually fly to the south, eating up everything as they go; formerly they were almost unknown in the region, because the Argentines were then covered with the coarse grass of the pampas. This the locusts did not especially care for, but now, since they have learned of the juicy, green wheat, they come in myriads every year.

It is hard to realize what a destructive thing such an invasion is. The locusts appear in swarms so great that they darken the sun if they fly between you and it. They alight on everything green and begin eating. The branches of the trees bend down with their weight and you can hear the snapping of their jaws as they crunch the leaves. They will strip an orchard in a night. They often eat the flesh from the fruit, leaving the stones of the peaches hanging to the bare branches. They are capricious in their feeding, for all choice trees or those that have been especially cultivated are sure to be devoured. They will clean the crops from the fields, eating the grain down to the ground. Sometimes they will take the green wheat from one side of the road and pass by that on the other. Sometimes they fly on and on for days over rich fields to feed on those beyond. The next swarm to come may eat what is left.


It seems incredible to think of locusts stopping railroad trains, but this is actually the case in Argentina. They come in such numbers that they cover the tracks; the cars crush them; the rails become greasy, and the wheels spin round without touching them and without moving the cars onward. At such times the rails have to be sanded to enable the cars to run. Locusts even eat the paint off the houses.

As the locusts move over the country they lay their eggs. Each female locust makes a hole in the ground and lays about a hundred eggs, which a month or so later hatch out one hundred young locusts, who crawl forth and begin their march over the country. Their parents, it may be, have pretty well cleaned up the crop, but the babies start out to eat what has grown up in the meanwhile. They cannot fly far at first, but they crawl along, consuming everything as they go. They cover the ground, climb the fences, and literally sweep the country of everything green. In a few weeks they grow wings and then fly onward to other feeding-grounds. No conception can be formed of the enormous numbers of these locusts. In one year sixteen tons of eggs were destroyed in one place. Billions of eggs are now being dug out of the ground and crushed, and to-day the Argentine farmers are fighting for their lives with the locusts. Thousands of dollars are spent every year to kill them. At the time of an invasion all the farmers must turn out and destroy them. They are caught in traps of corrugated iron. They are scooped up with scrapers and killed; poisons are used and grass plants and weeds are sometimes sprinkled with arsenic, kerosene, and creosote. They are caught in bags, driven into ditches, and killed in all sorts of ways. But a mighty army of them remains to occupy the renewed and unceasing attention of the farmer.

CHAPTER XXXVIII

SHEEP- AND STOCK-RAISING IN ARGENTINA

THE COUNTRY HAS MORE THAN 100,000,000 SHEEP, AND PRODUCES A HUNDRED POUNDS OF WOOL TO EACH OF ITS INHABITANTS—A LOOK INTO THE GREATEST PRODUCE MARKET IN THE WORLD—HOW ARGENTINA IS IMPROVING ITS STOCK—A RAM WHICH COST \$2,000, AND BULLS AT \$5,000 EACH—A VISIT TO THE LARGEST MEAT-FREEZING ESTABLISHMENT IN THE WORLD.

N THE last chapter I had something to say of wheat-farming in Argentina. In this I write of sheep- and stock-raising industries, which are infinitely more important to the prosperity and wealth of the country. The Argentine Republic is rather a pasture field than a grain farm. It has, indeed, the largest pastures of any in the world, vast pampas which extend on and on all about you as far as your eye can reach. Not one per cent of the country is agricultural; the soil in many parts is thin and poor, and the rainfall is scanty. Grass of some kind, however, grows almost everywhere, and more than one-half of the country is adapted to sheep-raising. The extent of the pasturage increases every year, while the character of the grasses improves with use; the old coarse grass disappears, and a more tender and nutritious vegetation springs up in its place.

How many sheep the pampas will support is hardly known: the business, as yet, is still in its infancy, although the aggregate number is close upon 100,000,000, or so many that, if they were equally divided, each family of Argentina would have a flock of more than 100 sheep. These sheep are scattered over the vast farms of the pampas, generally according to the wealth of the proprietor, but more with regard to the character of the soil. In some parts of Buenos Aires province the pasture is so good that an acre will support two or three head, while farther south four acres is often needed for a single sheep. The average of Buenos Aires province, which is perhaps the best of all the sheep-farming country, is 592 sheep to the square mile.

Sheep-farming here is conducted on a grand scale. There are few small flocks, most of the sheep-owners having from 20,000 to 100,000 sheep, and several men have as many as 1,000,000. On all the large holdings the business is managed in a practical way: each farm has its overseer and accountant, and great care is taken as to the breeds and also as to marketing the wool. The sheep are watched by shepherds on horseback, each having the care of one or two thousand sheep. It is the shepherd's duty to prevent his sheep from mixing with other flocks and to see



FLOCK OF SHEEP IN THE ARGENTINES

that they are free from disease. No feeding with hay or grain is needed, for the climate is such that the sheep have fresh grass from one year's end to the other. They wander off in the morning, grazing in the direction whence the wind blows, and return at night to sleep about the hut of the shepherd.

The Argentine shepherds receive from \$16 to \$20 per month, which is deemed good pay south of the equator, but none too much when one considers the dreary life which watching the sheep entails. The shepherd's home is a mud hut away out on

the prairie; his chief food is mutton, his employer allowing him to kill enough from the flock to supply himself with meat. He has plenty of land for a garden, but is usually too lazy to break up the soil and plant the seed.

Raising sheep for mutton is a new industry in this part of the world. In the past the profits came from the wool, skins, and tallow, and to-day sheep and cattle are sometimes killed for their skins and tallow, the meat being thrown away. About a generation ago one of the troubles of the sheep-farmer was the too rapid increase of his flock. They soon surpassed the capacity of his pastures, and instances frequently occurred of thousands of the older sheep being driven over the rocks into the sea. At times sheep were used for fuel; long ago, in the days of Spanish rule, an edict was published making it a crime to drive living sheep into the fires of the brick-kilns. At present it is estimated that the Argentine Republic raises one and one-half billion pounds more meat every year than she can consume, or enough waste meat to give every man, woman, and child in the world a full pound and have a hundred million pounds to spare.

It is this surplus that has caused the establishment of the beef-extract factories, which are so profitable in Uruguay, and also of the frozen-meat works of Argentina, in which beef and mutton are so treated that they will keep until they can cross the ocean and there be thawed out and sold in the meat-shops of Europe.

How would you like to eat a mutton chop two months old? Yet that is what they are doing in Europe. Hundreds of tons of frozen mutton is monthly shipped from Argentina to London. It is frozen so stiff that it will keep a year, and at the end of that time, when thawed out, taste as fresh as though cut from sheep at the time of killing.

The Argentines have invested millions of dollars in such freezing factories. In one year their sales of frozen mutton amounted to about \$2,000,000, and at present they are shipping about 200,000 frozen carcasses per month. They have one frozen-meat factory near Buenos Aires which has cost \$4,000,000; it is said to be the largest of its kind in the world, and it is now killing and freezing about 3,000 sheep per day. The factory is known as the Sansinena meat-freezing establishment. Through letters from its owners I was able to visit it. It is situated at

the south end of the city, near the wharves, so that the meat can be taken almost directly from its cold chambers to the steamers. It has vast cattle yards and extensive sheep pens. Its slaughter house covers more than an acre; it is of but one story, having a stone floor and a roof of corrugated iron. The floor, when I entered, was covered with flowing blood. A thousand live sheep were in the killing pens, and hundreds which had been skinned and cleaned were hanging from the rafters that they might cool before being put away in the freezing room.

I stopped a moment and took note of the killing. It is so quickly done that in four minutes by my watch a sheep passed from active bleating life to the condition of a carcass, so skinned and cleaned that it was ready for the meat shop, had it not been that it must first be frozen and then sent over 7,000 miles of water to market.

If sheep can understand and feel for their fellows, the killing must seem to them frightfully cruel. Scores of them await their turn, looking on while their brothers and sisters are butchered. In each pen there were at least fifty sheep: along the front, on a bench about as high as one's knee, lay rows of dying sheep, each with two great round holes in its white throat, out of which the red blood ran down into the stream of water which flowed through a little canal below. Some of the sheep were kicking; others groaned feebly, but I could see that their deaths came almost instantly. The killing is done with a long, sharp, double-edged knife. Two men catch a sheep in a pen and throw it upon the bench; they turn it upon its back and hold it while the butcher outside seizes it by the chin, bends its head down, and with one thrust drives the steel through its throat, cutting the jugular vein. He then goes on to the next animal, which is lying there ready for him, killing sheep after sheep at the rate of one or more a minute.

The freezing is done in great chambers, each of which will hold 60,000 carcasses at once. The chambers have walls of wood and sawdust a foot thick; their ceilings are covered with coils of pipe, through which flow ammonia and brine so arranged chemically that they reduce the air of the room to 30° below zero. It takes three steam engines to keep the pipes filled, and these work on day and night. The coils, when I saw them, were covered with frost an inch thick, and the chamber was intensely

cold. In it, hanging down from hooks with their headless necks toward the floor, were about a thousand carcasses of freezing mutton.

They were almost ready for shipment, and when the chief engineer, who acted as my guide, took down one to show it, I found that it would stand alone and that its flesh was as hard as stone. Within forty-eight hours after being put in the freezing room, the carcasses are perfectly hard. After they are frozen, they are sewed up in fine white muslin cloths and laid away in cold storage to await the next steamer. The average carcass weighs, when shipped, from 30 to 70 pounds, according as it is a lamb or a sheep. The sheep cost about \$2 a piece, as only the best animals are used for this purpose. Sheep, as they run in the flock, can be bought, I am told, for from 50 to 75 cents each. The freight to London is one or two cents a pound, and the mutton there sells for ten cents and upwards per pound. Everything possible is being done to reduce the cost of production. Much of the work is done by machinery, and the wages paid are lower than those of similar workmen in the United States. The average for slaughterers, skinners, and general workmen is less than \$1.10 a day, and the foremen each receive less than \$2 per day.

Leaving the frozen-meat factory, I drove to the "Mercado Central des Frutos," the great produce market of Buenos Aires, where wool, hides, and grain are sold in wholesale lots. It is the largest market of the kind in the world under one roof. It covers many acres, and millions of pounds of wool are handled in it every year. It is a brick building of three stories, lying near the docks on the Ricachuelo river, in "barracas." Barracas means warehouses, and Barracas is that part of Buenos Aires where the export business of the Argentine is done. The wool and hides are taken from the Mercado Central to the warehouses and there prepared for shipment.

At shearing time wool is sent here in train and shiploads. Usually there are not enough cars to haul the crop, and the vast market house is so full that one can hardly get through it. Its three floors are then packed with stacks of dirty greasy wool. Carts and waggons loaded with wool obstruct all other traffic; boats of wool crowd one another in the river, many of them being unloaded with steam cranes; and the cars are run right into

the market itself and there discharged. Each man's wool is put in a pile by itself. It is taken out of the bales and piled loosely in a stack, so that the buyers can easily examine it. In going among these piles you have to be careful to keep your clothes from touching them, for the wool is unwashed. It is so filled with grease that when I thrust my hand into a pile of it, it came out shining as though I had dipped it in vaseline. The shippers tell me that the wool crosses the ocean better in its unwashed state, and that it thus brings a greater profit. Wool loses from fifty to seventy per cent of its weight in washing, and the Ar-



IN THE WORLD'S BIGGEST WOOL MARKET

gentine farmers prefer to sell it at the lower rate and allow the European buyers to clean it.

The wool exports of Argentina are yearly increasing in volume; in 1860 the clip amounted to only 45,000,000 pounds. In 1891 it reached 310,000,000 pounds, and in 1897 472,000,000 pounds, or more than 100 pounds for each man, woman, and child in the Republic. The product per sheep is also steadily growing, and the average fleece-yield to-day is one-third again as large as it was in 1860.

Argentina not only surpasses the United States in its number of sheep, but it promises soon to surpass us in the quality of its wool and mutton. At present our average fleece per sheep is higher; but the Argentines are steadily improving their breeds by crossing them with the best rams that can be imported. Every day or so there is an auction sale of imported rams in Buenos Aires, at which fine animals bring phenomenally large prices; not long ago a California merino sold for \$2,000 in gold. I have visited some of the auctions and was surprised at the quality of the animals; they are superior to anything I have ever seen in the United States, most of them coming from well-known stock-breeders in England. I am told that shipments of so-called fine stock from the United States to the Argentine have usually resulted in loss to our shippers, as the stock was not up to the grade demanded by the Argentine buyers.

The wool of the Argentine is improving. For a long time there was only coarse wool, but now all kinds of fine wool are produced, and the Argentine merinos rank as high as any in the market. The merinos are, however, comparatively few here. The chief breeds are the Leicesters, Romney Marsh, Black-Faced Downs, Oxfords, and Cheviots. There is a cross of the Leicesters and the Merino which gives such excellent wool that at the Paris Exposition of 1889 Argentina stood first as a wool exhibitor, receiving one hundred and two prizes, of which twenty-three were gold medals.

Argentina is growing not only as a frozen meat and wool exporter, but also as a shipper of live stock. At the Buenos Aires docks there are large cattle and sheep yards, filled with animals awaiting shipment to Europe. I saw a large number of ships loading cattle and sheep there during a recent visit. The cattle are put into open pens, made of American pine, rudely put together on the deck of the steamer. Each animal has just enough space in which to lie down, and is so tied that its head is turned away from the water. The voyage is over such warm seas that no boarding in is done, and the cattle are practically all the voyage over out-of-doors. Above the stalls, roofing them as it were, are open pens, in which sheep are carried; these pens have no roofs whatever, while the sheep are packed in so closely that there is scarcely room for them to move about. From 1,500 to 2,000 sheep and from 200 to 500 cattle are taken on a

single steamer, the result of the overcrowding often being a considerable loss. One of the ships I saw leaving for London had 300 steers and 1,500 sheep, and another was loading a cargo of 500 steers and 1,700 wethers. At present more than 50,000 live sheep and 10,000 live cattle are exported monthly to Europe.


The Argentines are now raising cattle for milk and improving the common stock by importations of fine animals. They have several bulls, each of which cost over \$5,000 in gold, and during the past year as many as 1,600 fine bulls have been imported. I have never seen better animals than those offered for sale at the Buenos Aires auctions, and the cattle on the farms are of a high average. No steer is accepted for export which weighs less than 1,320 pounds, and many of those shipped weigh 1,600 pounds. The average price per beast paid by the shipper is about \$20 in gold.

The wild cattle of the Argentine pampas of which you have read in your geographies have long since disappeared, and questions about them create considerable laughter. A few months ago a resident of Buenos Aires received a letter from a professor in one of our leading American colleges stating that he "expected to take a hunting trip to the Argentine and would like to know if he could shoot the wild cattle near Buenos Aires without a license." The man evidently had not learned that every beast in Argentina has an owner, and that all stock here is as carefully watched and tended as is our stock at home.

CHAPTER XXXIX

HOW THE ARGENTINE REPUBLIC IS GOVERNED

ITS PRESIDENT AND CONGRESS—ELECTIONS HELD ON SUNDAYS IN THE CHURCHES
—EVERYTHING IN THE HANDS OF RINGS—POLITICIANS WHO STEAL
MILLIONS—THE FRAUDS OF THE NATIONAL BANKS—THE JUDICIAL
SYSTEM AND THE POLICE—THE ARMY AND NAVY.

URING my stay in Argentina a new president was elected. General Julio A. Roca, the Ulysses S. Grant of the Argentine Republic, was again chosen as the head of the government. His election did not mean that he was the choice of a majority of the Argentines, but merely that he was the strongest man in the small coterie that governs the country. South American elections are not like those of the United States; each nation is only nominally a republic, and the people have but a nominal right to vote. A few persons in each country really control everything political, and the ballot-boxes are stuffed to suit their designs and conspiracies.

In Buenos Aires the elections are held on Sundays in the porches of the churches. Outside the church doors are tables, around each of which sit several seedy-looking men, the receivers of the election. The ballots are of paper, and are dropped through slits in the boxes. Many voters hand their ballots to the receivers and ask them to vote for them. One man often repeats his votes, giving another name at each repetition. The receivers recognize the fraud and are a party to it; at least they do not object.

The better classes of the people realize the impossibility of a fair election and refrain from voting. As an instance of how things are done, take the last election for Senator in Buenos Aires. The city has a population of 800,000. At the election there were only 2,000 votes cast, whereas reckoning one vote to each family of five, there must have been 160,000 possible votes. The election lists are scanned by the candidates beforehand and



GENERAL JULIO A. ROCA, PRESIDENT ARGENTINE REPUBLIC (359)

added to or taken from as is desired. Not long ago the mayor of Olivera was looking over such a list with a friend of mine, when he came to a name which we shall call "Munyo," and my friend said, "Why, mayor, Munyo is dead. Don't you remember we were together last month when the report of his death came in?" "Oh, yes, I remember," replied the mayor, "but if he is dead that is all the better; he can't now make any fuss as to how his vote shall be cast."

This corruption in politics extends to every part of the republic. Every province has its political factions, most of which are connected with the ring in Buenos Aires and take their cue from it. The government is entirely in the hands of the native Argentines, who are natural politicians, and work the business for what it is worth. But the serious thing is that the country is overgoverned. It has, all told, only 4,000,000 people, of whom one-fifth live in the capital. Yet every state has its own senate and popular chamber, each with its own minor officers. The result is that with a population not greater than that of the State of Ohio Argentina has, in addition to a horde of federal officers, 15 senates, 15 chambers of deputies, and 15 sets of revenue collectors; it has small officials without number, all of whom receive salaries and most of whom add to them in some way or other not sanctioned by law.

All the provinces are in debt, and but a few of them pay their interest. The internal debt of the country now amounts to almost \$200,000,000, and in 1895 the provincial debt, including unpaid interest, amounted to more than \$137,000,000 in gold. At present (1899), the city debts foot up more than \$24,000,000 in gold, while the country has a national debt of over \$350,000,000. A large number of the provinces have annually to be assisted by the government so to pay the salaries of their officials.

The Argentine Republic has a federal congress, which meets at Buenos Aires. There are two houses, one composed of senators, the other of deputies. Senators must be thirty years of age, have resided six years in their districts, and have annual incomes of \$12,000 each. A deputy must be twenty-five years of age and must have been a citizen for four years. The deputies are elected for four years and the senators for nine years. The president is elected for six years. Members of congress each receive \$12,000 in Argentine money per year; the president has a

salary of \$36,000. The vice-president receives just half as much as the president, and each of the cabinet ministers gets \$16,800 per annum.

You sometimes see statements in Northern papers that there is a close telephonic connection between the national capital at Washington and Wall street. The Argentine congressman is not troubled by having to telephone. The houses of congress in Buenos Aires are just across the square from the stock-exchange, and the president's house stands between. Some of the greatest scandals of the Argentine Republic have been in connection with the misuse of the public funds by government officials, and this especially as to the national banks and stocks. There has seldom been such corruption as there was in connection with the National Bank of the Argentine, which failed for many millions. The bank was largely political, and a prominent official could cause it to pay out money to almost anyone. Many of the congressmen drew upon it for their support. I heard of one deputy who borrowed a million dollars from the bank and with this built a palace at Belgrano, one of the suburbs of Buenos Aires. In getting the loan he agreed to repay it in instalments, so much every three months. When the first payment came due the bank directors sent for him. On his appearing they presented the note; he looked at it and coolly said that he had no money. They then asked him to pay the interest, but he nonchalantly replied, "I have nothing." He was then asked if he could not pay some of the interest, whereupon he burst out in a rage, saying: "I have no money, I tell you. I doubt whether I will ever have any for you, and I want to know right here and now whether you expect me to fight the battles of your bank in congress and then pay back the money I get from it just as other people do?" The last accounts indicate that the million dollars and accumulated interest were still outstanding, and that the indebtedness will probably remain until the end of time.

Another instance of the looseness of the business methods of the bank is shown in the case of an irresponsible army officer of Cordoba, who wanted to borrow \$6,000 to build a house. He knew Julius Celman, who was then president of the Republic, and called upon him for a note of introduction to the officials of the bank. President Celman not only introduced him, but recommended that the money be lent him and by a slip of the pen I

suppose, asked that he be given \$60,000 instead of \$6,000. The officer went to the bank, showed the letter and signed an application, which the clerk made out for him, the clerk putting in the \$60,000 as requested by the president. The bank directors voted that he should have the money, and the papers were made out, the officer signing the note without scanning the figures. When this was done the teller of the bank handed out \$60,000 to the officer, whereupon he replied that he had not asked for \$60,000 but only wanted \$6,000. Whereupon they showed him the papers. The army officer pointed out the mistake and asked what he should do. They replied that he had better take the \$6,000 and leave the remainder of the money on deposit, and that when the first payment came due he could pay the whole note. So leaving the \$54,000, the officer went away. Later on, however, he met a friend who persuaded him he would be a fool not to take all the money, as he could certainly make more by using it for speculating. The result was that he did take it and lost the whole, and the bank was never repaid.

Orders like this for money from public officials were frequently given to the national banks. The standing of the man who was to receive the money was seldom questioned, although cash was given in exchange for his notes. I have heard of common peons who thus got money on their worthless notes at the instance of politicians, who paid them for the use of their names.

The bank would accept drafts twenty or thirty times greater than those which its directors authorized. One of the directors was always to be bought by a bribe. False balance sheets were periodically published to deceive the public, and dividends which had never been earned were paid out of the bank funds. The bank at its inception had a capital of \$8,000,000; ten years later this was raised to about \$20,000,000, and it was afterwards increased to \$50,000,000. In one year its deposits were \$253,000,000, and its loans were \$412,000,000. It had in its vaults \$432,000,000 of national treasury bills, and it had a savings department in which \$1,400,000 were deposited. The bank went down in the panic, as did other banks of similar character. One was a mortgage bank whose business was lending good money on bad property. The government was also interested in this, and many a swamp lot was used as security for a \$10,000 loan. To-day such banks have passed away, and the man who makes money

out of the government must do so either through bribery or by getting a fat contract.

Buenos Aires has many fine public buildings. It has as fine steamship docks as any European port, and it is now erecting a great structure to correspond with our national capitol at Washington. I do not know the exact amount of money that is to be spent upon this, but it will probably be enormous, as Buenos Aires is extravagant beyond description in such matters. Take, for instance, the water-works. The houses of rich millionaires in New York have no finer tiles about their mantels than the material which adorns the outside of this public building. The structure covers four acres, and it is all faced, not with stone or pressed brick, but with costly porcelain tiles. Every tile was imported from England. I have seen the tiled walls and roofs of the palaces of the Emperor at Peking, but the water-works building at Buenos Aires has a finer covering. The building has cost about as much as our national library at Washington, and its only use is to hold twelve huge iron tanks, through which is filtered the water of Buenos Aires. The tanks themselves, which are worth seeing, cost \$2,000,000. Each of them weighs 14,000 tons, and all fill the great building from floor to mansard roof. The water flows in from the river through pipes so large that they can carry 20,000,000 gallons in twenty-four hours. The tanks will hold 15,000 gallons at one time, and a continuous stream of water is filtering through them, so that they contain much more than this amount in a day. It is said that there was corruption in the letting of the contract for this building, and that the government officials who secured it were able to put in the neighbourhood of \$1,000,000 into their own pockets.

The Argentine government finds that it cannot afford to hold on to its railroad property. There are annually deficits, where there should be dividends. The lines are consequently passing into the hands of the English. Those that are still controlled by the government have such poor rolling stock that the private companies will not allow government cars to pass over their rails; they prefer to tranship. Appointments on the government railways are commonly made without regard to efficiency or previous experience; politicians after jobs apply for the places. One prominent man recently asked to be made assistant-manager of the Central Argentine system. He was questioned as to his

experience, and replied that he knew all about the railroad, for he had travelled over it as a passenger several times! The government lines are generally in bad condition. All sorts of jokes are made concerning them, a common charge being that they should put cow-catchers on the rear of the trains to keep the cattle from running over them. The private lines, on the other hand, make money; they are carefully constructed, well managed, and economically run.

Theoretically, the judicial system of the Argentine Republic is admirable. There is a supreme court of five judges, which is also a court of appeal. There is an attorney-general, who is supposed to bring criminals to the bar, and there are a number of inferior and local courts. According to the constitution, trial by jury must be given in criminal cases and each state has its own judicial system. In 1895, 4,500 criminal cases were tried in Buenos Aires, and there were during that year 14,000 arrests for breaches of the peace. You find policemen on every corner in the Argentine capital; they are well dressed, and carry swords, with which they are ready to cut down any one who resists them. On opera nights a company of mounted police on prancing steeds guards the streets leading to the opera house, and on every public occasion the police are out in force. As a rule, you will find order in Buenos Aires as well kept as in any city in the world.

The matter of a police appointment is one of political influence, and the police are very careful whom they arrest. One of the *distinguidos*, or upper class of young men, may get as drunk as he pleases and it is rarely that he is arrested, while a poor Italian or Spaniard will be quickly taken to jail. In the courts the rich stand a much better chance than the poor. There are, of course, some just judges, but the judges who will not accept bribes are in the minority. Prominent Argentines are awarded the preference in the courts where the matter of right is not at all equally balanced; as a rule, the man who "sees" the judge first has the best chance of a decision in his favor. There is no lack of lawyers, for many of the young Argentines of good families adopt law as a profession, some not expecting to practice, but only to have the title of doctor before their names. There are many good lawyers and not a few have large incomes from their practice.

During my stay in Buenos Aires I have seen much of the Argentine army. The regular soldiers are drilling daily in Palermo Park, and companies of militia are being organized. While at the races I saw military recruiting officers go from man to man and demand papers showing whether or not they were Argentine citizens. If Argentines, of a given age, they had to explain why they were not in the national guard or accompany the officer to be enrolled. The strained relations between Argentina and Chile require each nation to be in good fighting trim, and



ARGENTINE TROOPS OF THE LINE

for this reason the armies of both are carefully trained. The Argentine republic has now a regular force of about 30,000 officers and men and a national guard of 480,000. It has one of the best navies in South America, including fine coast-defence ships, armour clads, six armoured cruisers, three second-class cruisers, and seven smaller cruisers and gunboats. Its naval vessels are in number and size about equal to those of Chile, though I doubt if they are in as good condition or as well manned. The Argentines can put more men in the field than Chile, but from cursory investigation I should say that the Chilenos have by far the better drilled and physically the stronger soldiers.




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ON THE TRANS-ANDEAN RAILROAD

CHAPTER XL

ACROSS SOUTH AMERICA ON THE TRANS-ANDEAN RAILROAD

THE TRANS-ANDEAN RAILROAD—HOW THE TRACK CLIMBS THE ANDES—SNOW-SHEDS CUT OUT OF SOLID ROCK, AND OTHER CURIOUS FEATURES OF RAILROAD-BUILDING—GROCERIES ON WHEELS, AND FREIGHT CARS WITH SAILS—A LOOK AT ACONCAGUA, THE HIGHEST OF THE ANDES—SINGULAR FEATURES OF NATURE ON THE PAMPAS, WHERE IT SOMETIMES RAINS MUD.

CROSS South America by railroad; climbing over the Andes on iron tracks; drawn through the vast pampas of the Argentine by a locomotive; joining the Atlantic and Pacific by an iron band—this is the problem which has long been agitating the Argentine and Chile, and which is now almost solved.

As it is, the railroad is about completed. There are now less than 40 miles yet to build, and there will soon be an iron track from ocean to ocean. The railroad from Mendoza to Buenos Aires is excellent, although the distance is 654 miles; there is also a fairly good line from Mendoza nearly to the top of the Argentine Andes. I travelled on the western part of the Trans-Andean track from Valparaiso on the Pacific to within a few miles of the Argentine boundary and found it well built. At present trains are running over the Trans-Andean road three times a week, travellers being taken over the unfinished part in a day on mules or in carriages. Even old people and little children can now make the journey without much inconvenience, and during the summer there is plenty of travel. With the stops it now requires but four days to cross South America, and when the last link is joined, the trip from Valparaiso to Buenos Aires will be made in twenty-nine hours.

The Trans-Andean Railroad will be just about as long as from New York to Chicago, and it will reduce the time between Valparaiso and London by fully two weeks. It will get all the

travel which now goes from the west coast around the Strait of Magellan to Europe, and Australian passengers will come from Europe to Buenos Aires, thence by way of Valparaiso, where, by a new line of steamers now proposed, they will be carried on to Australia. It takes 37 days to go from the chief ports of Chile to Europe *via* the Strait of Magellan. It requires about 16 days to steam from Valparaiso to Buenos Aires, while from Buenos Aires to Liverpool is about 20 days more. By the railroad one will be able to cross the continent in less than two days, thus saving 14 days over the Strait route to the Atlantic ports, and 15 days on the voyage to Europe.

As it is now, the road is profitable in the summer, notwithstanding the enormous cost of transportation between the sections. When it is completed traffic can be carried on throughout the year. At present, during the heavy snowfalls in the Andes, passengers have to wait for days at one side or the other. This will be obviated by snow-sheds which are being cut out of the solid rock, so that the cars can go through whether it snows or not. There are 40 miles of wooden snow-sheds on one of our railroads in the Rockies. Here stone sheds will be cheaper. The Trans-Andean route, however, will not need so many sheds, nor will it have such heavy and long-lasting snows.

Crossing the Andes at this pass is not a greater railroad undertaking than crossing the Rockies. The truth is, the highest point of the road when completed will be about 200 feet lower than Marshall Pass on the Denver and Rio Grande, and less than 500 feet higher than Leadville. The Upsallata Pass, where the road goes over the mountain, is 13,000 feet high, but the tunnel will be only 10,642 feet above the sea. It will be almost a mile lower than the tunnel through Mount Meiggs on the railroad which crosses the Andes back of Lima, Peru, and more than three-quarters of a mile lower than the railroad from the sea up to Lake Titicaca on the Bolivian plateau.

The building of the road offers no engineering difficulties which cannot be easily surmounted. The summit will be reached by a rack rail in the centre of the track, the cars being hauled by locomotives on cogged car-wheels, which work in these racks. The track will be about the same as that on Mount Washington or Pike's Peak, or the Righi. This cog line is a narrow gauge, while both the Chilean and the Argentine railroads which connect

with it are broad gauge. The cog line is only three feet three inches wide, and transfers will have to be made at both ends of it; in this respect the plan of construction is bad. There should be one gauge from ocean to ocean, so that goods can be taken without transfer from the Pacific to the Atlantic, and *vice versa*.

The Trans-Andean Railroad is one of the chief scenic routes in the world. Suppose we cross the continent by it, starting at Valparaiso, on the Pacific. The city has 100,000 people, and its



UPSALLATA PASS

STONE HOUSES BUILT TO PROTECT MAIL-CARRIERS WHEN OVERTAKEN BY STORMS
IN THE MOUNTAINS

houses are as fine as those of any European seaport. They are built in terraces rising in the shape of an amphitheatre around a magnificent bay. There are green trees among them, and the flowers bloom all the year round. We step out of the boat on to stone wharves and are taken in a carriage to a fine two-story stone station. Here there are waiting-rooms for first- and second-class passengers. We ask for our tickets, but are told that it is yet half an hour before the train goes, and that no tickets will

be sold until within fifteen minutes of starting-time. We wait, and the agent finally opens the window and gives us our tickets. We try to check our baggage, but are told that nothing is free, and that we must pay express rates on every pound. We get a receipt, however, and then cross over the track to reach the cars. We step down to do this, for the tracks are sunken and the platforms are level with the floors of the cars.

While we wait for the train let us take a glance at the passengers. Beside me stands a young English girl, with school books under her arm, and there are English and German merchants who are booked for Santiago. There are Chilenos, with big hats and ponchos, who have come in from the country, and Chilean women who have their faces coated with powder, looking all the more ghastly from the black shawls on their heads. There are young priests in black hats and black gowns that reach to their feet. There are Chilean military officers in gay uniforms, and black-eyed boys who are going from school to their homes in the interior.

A bell is rung before the train leaves. We skirt the harbour, pass through the fashionable suburb of Vina del Mar, and come almost at once to the foothills of the Coast Range. We pass oxen ploughing in the fields, dragging wooden ploughs through the furrows by a pole fastened to a yoke on their heads. We go by great vineyards, lemon orchards, and orange groves, and now and then stop at a village or city of flat, one-story houses. We pass over one low ridge after another, rising higher each time, until we come to the great valley in which Santiago, the capital of Chile, lies. We ride over this valley all day and then strike the second range of the Andes, with the highest peak on our hemisphere rising above us. The peak is Aconcagua. It is almost 24,000 feet high, and it touches the sky farther above the sea than any peak outside the Himalayas. The snow on its top is perpetual; the ice upon its sides never melts; while the winds that blow over it, in their everlasting march from ocean to ocean, howl at times like the shrieks of the damned.

We stop over night at Los Andes, a town in the valley of the Aconcagua river. It has about 6,000 people and is surrounded by orchards of apple and peach trees, with rich irrigated gardens lying high up in the mountains. From here the railroad has been extended to Salto del Soldado, where you take mules or



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THE ANDES—COACH-ROAD FROM ARGENTINE TO CHILE

stages to go over the pass. The end of the road is about as high as the top of Mount Washington, and from there on, the route is exceedingly steep. The country is wild in the extreme. Much of the mountain region is nothing but a desert of rocks and snow, inhabited only by condors, with here and there a guanaco, resembling a species of wild llama. We cross the Puente del Inca, a wonderful natural bridge, near which there are hot springs of crystalline water, and enter the Valley of Death, or Cuevas Valley, where are skeletons of mules and oxen, the remains of the dead from the droves which to the number of thousands are annually driven across the mountains. As you rise to the high elevations you are fortunate if you do not have "soroche," or mountain sickness, and you are glad when you have passed the cumbre or summit, and are on the railway which takes you down to Mendoza, in Argentina.

From Mendoza to Buenos Aires is about as far as from New York to Cleveland. The road is one of the older of the Argentine lines. Its cars are not uncomfortable: they are built somewhat after the Mann boudoir order, with little apartments running through them, reached by an aisle outside. Each apartment has four berths, two upper and two lower. During the daytime the upper berths are put up and you sit on the lower benches facing your fellow-passengers. At night the bedding is brought into the cars from the baggage coach, and one's bed is made up by the porter.

Most of the sleepers have travelling bars on them. The bar is in the baggage-car. It is furnished with all kinds of liquors, and you can get anything from champagne to cognac and from apollinaris to beer. There is a little stove in the car, on which the porter makes coffee, and brings it to you in the morning before you are out of bed. He charges you about eight cents for a cup of coffee, a biscuit and a little butter, which is quite cheap enough. Most of the other meals are taken at the stations, about thirty minutes being allowed for breakfast or dinner; the violent ringing of a bell announces the starting of the train. The sleeping-cars are more plainly furnished than ours, and the bedding is not so good.

In commenting one day on the lack of fine furniture, an English railroad manager told me that the Argentine companies find that it does not pay to make extravagant cars, for it is difficult

to keep them in order. Said he: "You would be surprised at the wanton damage that is done by passengers. Many of the Argentines are born iconoclasts. They use their diamonds to scratch their names on the mirrors and plate-glass windows. Some of them get into bed with their boots on, and others are filthy in the extreme. We have to watch things closely or they would be stolen or destroyed. Why, we have had passengers throw blankets out of the windows, merely as a matter of fun, and we have so many such losses that we now take stock at the close of every run."

Nevertheless, Argentina is well equipped with railroads. It has more roads than any other of the South American Republics, and it is now building many new lines. There are 11,000 miles of railroad in operation. Three years ago there were not more than 9,000 miles. The roads, moreover, are growing better every year; they are chiefly in the hands of private parties, the government having practically relinquished its idea of controlling them. It is different in Chile, where the roads are also good, although they are not more than one-fifth as extensive—that is in length of lines. The Chilean government seems to be gradually acquiring the old roads and is also building new ones.

There is no place in the world where it is easier to build a railroad than on the Argentine pampas. The land for hundreds of miles is perfectly level and so solid that but little ballast is needed. One of the chief expenses is the ties, for there are no trees on the pampas, and all kinds of lumber must be imported. Many of the ties come down the Paraná river from Paraguay. The favourite kinds are of quebracho and other hard woods, which are so heavy that a single tie will often weigh 200 pounds. The wood is so hard that spikes cannot be driven into it without first boring holes for them. After the rails are once fixed, it is impossible to draw the spikes out.

Most of the Argentine railroads are in the hands of the English. Some have been built, much like our roads, at heavy capitalization, and with their ups and downs on the stock market. It is safe to say, however, that more than half a billion dollars have been spent in constructing railroads through the Argentines. In 1896 the capital stock of the roads footed up over \$510,000,000, and their gross receipts were more than \$31,000,000, while the



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FRONTIERS OF ARGENTINA AND CHILE, SUMMIT OF THE ANDES

expenses were not more than \$16,000,000. This left a profit of \$15,000,000 in gold for the year, or about three per cent on the total amount spent in constructing them. The average profits of the better roads were high, while many of the others had deficits, not dividends. Most of the roads are of the English broad gauge, that is wider than any of our roads at home. The steel rails now being used by the Southern Railway weigh 74 pounds to the yard. They are imported from England, whence most of the rolling stock has been brought, although the chief companies have now their own shops and are making cars. There are a few Baldwin and Rogers engines in use, but these are chiefly on the government lines.

Italians are the chief workmen on the Argentine railroads. The work is done by contract, one Italian taking a gang and doing his work by the job or by the yard. On a road in Patagonia which I visited I found twenty gangs, each containing ten men, laying tracks; they were given so much per mile. The workmen lived in tents along the railroad, and they were supplied with provisions from a provision car. The provision car is an odd feature of railroad building in this part of the world. It is called a *provideria*; it is, in fact, a little department store on wheels. The car is fitted up with shelves upon which are clothes, tobacco, liquors, groceries, and in short everything that the men can possibly want. It is in charge of a store-keeper, who furnishes goods to railroad men at the lowest possible rates. The company supplies the goods and pays all the bills. It keeps about \$80,000 worth of goods in stock, and sells them to its men at a profit of about three per cent. It puts the goods at such prices that the men can buy more cheaply than at the stores. For instance, good Italian wine is sold for about forty cents of Argentine money a quart; this is less than fifteen cents American. Beef costs about four cents a pound, and clothing is proportionately cheap. Among the curious things I saw in one of these cars were London jams and Indian Chutney. I also saw olive oil, macaroni, and all kinds of crackers.

I was interested in the track-layers and visited them in their camps. They tell me that a man can live by using the "provideria" on about twenty cents a day, and that their average wages are about \$25 gold per month; many of them save \$18 a month out of the \$25. The men complained that their tents

were too small. They were of the A shape and so small that only four cots could be placed in each tent. Five men I found, however, were allotted to a tent, and so one had to sleep on the ground.

One of the chief discomforts of railroad-riding in the Argentinians comes from the winds; it blows on the pampas at times with all the force of a Kansas blizzard. I am told that while the road from Buenos Aires to Mendoza was building the cars were sometimes blown off the track, and that it was customary to put sails on the freight trains and allow the wind to push them along



SOUTHERN RAILROAD DEPOT—•THE ENGLISH OWN THE RAILROADS•

over the rails. This, however, I doubt, as I do other tales told here in this land of luxury, laziness, and lying.


I do not doubt, however, the stories as to the dust. There is no land where the dust blows more than in Argentina. Its dust-storms are heavier than our snow-storms; they sometimes stop the cars, filling the grades and cuttings so that a plough is often needed to get through. During a dust-storm a few years ago it took 2,000 men a week to clear the track on one of the roads. Such storms sometimes obscure the sun, and if rain comes

while the dust is in the air it brings with it a shower of mud which paints the houses, fences, and everything with a sticky mass. If the rain continues, the wood is scoured clean by the mud, but if not, it is left in a most deplorable condition. I have heard of dust-storms that have filled the floors of the cars, the dust being so fine that it went through the windows and doors, and I know to my sorrow that such a storm will coat your face and clothes in ten minutes and make white man and Indian, African, and Caucasian of the same gray complexion. It will cause your lips to crack and dust your tongue so that you feel as though you had been biting into one of the apples of Sodom and had gotten therefrom a mouthful of ashes.

CHAPTER XLI

THE UNITED STATES AND ARGENTINA

WHAT SHOULD BE DONE TO BETTER OUR TRADE?—WE NEED AMERICAN STEAMERS AND AN INTERNATIONAL AMERICAN BANK—HOW THE ENGLISH ARE MAKING MONEY IN SOUTH AMERICAN BANKING—STOCK SPECULATION IN BUENOS AIRES—A DAY ON THE EXCHANGE—OPPORTUNITIES FOR INVESTMENT.

HE United States will not be able to compete with the European nations for the trade of the Atlantic coast of South America until it has closer commercial connections. Steamship lines and banking companies are among the tools of commerce, and until we own such tools we cannot hope to compete with other nations which are so equipped. To get our share of the trade of Argentina we need a fast line of American steamers running from New York to Buenos Aires, making regular trips from one port to the other. We need also an American bank at the Argentine capital, with its connections in New York and its branches in the larger cities of Eastern South America.

As to steamships, those that come from Europe to Buenos Aires are so much finer than those from New York that many passengers prefer to travel *via* Europe, although the distance is about three thousand miles greater. The freight rates of the various lines are such that goods can be sent from New York, *via* Europe, to Buenos Aires, almost as cheaply as on steamers that go direct. Shipments, moreover, can be made much more quickly, the result being that much of our goods sold to South America crosses the Atlantic twice on the way to their destination.

To-day there is not a single port of importance on the European coast that has not weekly steamers to Buenos Aires, while New York has steamers only fortnightly and often only once a month. At Buenos Aires or Montevideo you can get a ship for Europe almost any day of the week while you often have to wait



BUENOS AIRES HARBOUR—"THERE IS A BIG CHANCE FOR A YANKEE STEAMSHIP LINE"

weeks for a direct passage to the United States. The steamship lines which ply between Buenos Aires and Europe are managed by companies with large capital. The Royal Mail sailing from Southampton has a capital of \$4,000,000. The North German Lloyd from Bremen has a capital of \$9,000,000, and the capital of the *Campagnie des Messageries Maritime*, sailing between Buenos Aires and Bordeaux, France, amounts to \$11,000,000. All of these companies pay dividends, as do also the other English, German, and Italian lines that regularly call at Buenos Aires. A fast line of American steamers could take one from New York to Buenos Aires in seventeen days, and the journey would be almost a pleasure trip. The line would secure a large part of the carrying trade of the east coast of South America, a trade annually amounting to \$100,000,000, and it would probably pay from the start.

An American bank might be organized in New York to do business in South America with headquarters at Buenos Aires, and if properly managed it would be very profitable. It should have a capital of several million dollars, subscribed by stockholders interested in exporting and importing. Such a bank would have the handling of most of the hundred million dollars of the commerce above mentioned. Its profits upon this exchange alone, if we could control it, would be worth \$1,000,000 a year. At present all banking is done through London, and the bankers there take a toll of one per cent for allowing our drafts to pass through their hands. This is a tax of one per cent on trade, to say nothing of the tax paid in the way of freight charges to European vessels.

Nearly all the foreign banks of South America are making money. They charge for every accommodation; some pay dividends of 16 per cent, and some give 5 per cent on deposits. They operate with large capital. The London and River Plate Bank of Buenos Aires has a capital of \$7,500,000, and its reserve fund amounts to \$5,000,000. It keeps something like £1,000,000 in English sovereigns in its vaults, and its deposits amount to \$80,000,000. The Anglo-Argentine Bank, another English institution, has \$2,250,000 capital, and the London and Brazilian Bank has a capital stock of \$7,500,000. There are also several strong Italian banks, a number of German banks, French banks, and Spanish banks, and, in fact, almost the only country

that does business with Argentina without direct banking connection in Buenos Aires is the United States. These banks do not speculate, and so far as I know no foreign bank doing business in Argentina has failed. The great speculation of a few years ago was chiefly confined to the native banks. Argentina had a great boom which collapsed and thereby almost ruined the people. To-day the speculative craze has passed away; it has taught the Argentines their lesson, and property is more stable.

The larger enterprises of all kinds are now managed by foreigners, and from year to year the government holdings grow less. A foreigner's property is perfectly safe; he has, in fact, equal rights with the naturalized Argentine, and he is subject to no heavier taxes. All businesses, however, have to pay licenses ranging from \$5 to \$20,000 per annum, according to the amount of business done. Banking firms pay even more, the highest tax on such firms amounting to \$60,000. Foreigners who do business, with or without a house in Buenos Aires, have to pay from \$100 to \$500 for the privilege, and those who are only commercial travellers pay a fixed license of \$50. This sum permits them to sell only in Buenos Aires and the national territories; if they go outside Buenos Aires there is usually a state tax which is paid in addition, and this ranges from \$100 to \$300 a year, according to the laws of the state. There are, of course, other taxes on business, such as stamps, etc., but these are somewhat the same all the world over.

As to stock-gamblers, Buenos Aires has as great a number of "bulls" and "bears" as any other country in the world. Its stock-exchange or "bolsa" is the financial centre of Argentina. In it you can feel the pulse of the money market and can see as much crazy speculation as in Paris, London, or New York. The great boom, which burst in 1890, came from the rapid growth of the country during the previous ten years. Its growth was discounted over and over again, and in ten years more than \$662,000,000 worth of stock was floated, and of that quite half a billion dollars were totally lost. There were land companies, railway companies, insurance companies, banks, and in fact almost every kind of institution, capitalized at millions. Most of these have entirely disappeared from the market, while the shares of other companies have declined ninety per cent. I doubt whether there has ever been such loose business methods as prevailed here at that time.

The officers of the government were in many of the deals. Even the highest officials speculated with government money, and through the government banks allowed millions to be loaned on mortgages on worthless property. Europe sent millions to fill the gaps, expecting to get tens of millions back, and when the bubble burst the Baring Brothers and other long-established London firms came near bursting with it. To-day the chief speculation on the stock-exchange is in the money of the country. The brokers buy and sell gold, which is up to-day and



STOCK-EXCHANGE, BUENOS AIRES

down to-morrow, or rather they sell the credits of their country. In other words, most of their business is in buying and*selling their own notes.

There is no more interesting place in South America than this stock-exchange of Buenos Aires. Its doors are guarded by footmen in livery, and from 12 to 1 o'clock and from 3 to 4 P. M., you may meet on its floors the brightest men of the Argentines. The membership costs almost nothing, and the dues are less than \$3 per quarter. The result is that there are 700 brokers, and nearly every prominent business man in the city is a member of

the exchange. The stock-exchange is not unlike a business man's club, and if you could enter it without knowing where you were going, you might well imagine yourself in the stock markets of New York or Chicago. The one difference is the language, for the men are of all nationalities, and they dress and look much like their brother brokers in London, New York, and Chicago. The same mutations of fortune exist, and each man can tell you the story of his own ups and downs—of fortunes lost and won. Speculation makes and loses money just as quickly in Buenos Aires as in New York; and as the commercial relations of the United States and Argentina grow closer, I predict that Americans will here hold their own with the Italians, Germans, and English, as they make their bids for the financial plums of the Argentine Republic.

As to general investments Argentina offers excellent chances for capitalists who care to buy lands. Real estate has been rising for years and is still going higher. Land is bought by the square league, of 6,666 acres. It ranges in price from a few hundred up to fifty thousand dollars a league, according to its character and location. There is also money to be made in manufacturing, in the organization of electric railways, and along other such lines. There is, however, no opportunity for the man without capital, especially when the lack of capital is accompanied by the lack of a working knowledge of the Spanish language. Spanish is used everywhere, and without it no man can do business. People with capital can buy their interpreters, but they will labour under obvious disadvantages. Men without capital will have to compete with the cheapest labour of Spain and Italy, and must work for wages much less than those paid for the same class of brain and muscle in the United States.

CHAPTER XLII

UP THE PARAGUAY RIVER

A THIRTEEN-HUNDRED-MILE TRIP ON THE RIO DE LA PLATA SYSTEM INTO THE HEART OF SOUTH AMERICA—THE PARANÁ RIVER AND ITS TEN THOUSAND ISLANDS, WHICH ARE FLOATING DOWN TO THE SEA—STRANGE SIGHTS ON THE PARAGUAY RIVER—MONKEYS, PARROTS, JAGUARS, AND CROCODILES—LIFE ON THE RIVER STEAMERS—SINGULAR TABLE MANNERS.

I AM in Asuncion, Paraguay, in the heart of South America. The city is as far inland in a straight line from the Atlantic as Chicago, but I had to travel farther than from New York to Omaha to reach it. I started at Buenos Aires, on the Rio de la Plata, about 200 miles from the ocean, and travelled from there a distance of 1,115 miles on the Paraná and Paraguay rivers.

On the first day out we steamed past the mouth of the Uruguay river and entered the Paraná. About 800 miles farther north we came into the Paraguay river and sailed up it for more than 300 miles. The Paraguay is navigable by small steamers for 1,400 miles north of this point, and just opposite it is the mouth of the Pilcomayo, which rises in the Bolivian Andes and in a tortuous course flows for 1,500 miles through unexplored wilds before it empties into the Paraguay. The Paraná itself is over 2,000 miles long; it rises in the mountains of Brazil and flows more than 1,200 miles before it swallows up the Paraguay.

The river system of the Plate, or of the Rio de la Plata, is one of the most wonderful in the world. The volume of the stream is greater than that of the Mississippi; it is surpassed only by the Amazon. It drains a basin more than half as large as the whole United States, and one which in fertility of soil and salubrity of climate is surpassed only by the basin of the Mississippi. The basin of the Plate is over 2,000 miles long; it

is longer than the basin of the Mississippi, and it is a question whether it has not more cultivable territory. Upon it tens of millions of cattle and sheep are pastured, and its wheat-fields compete with ours in the markets of Europe. It has the most extensive plains on the globe and a vast expanse of fairly good land.

The basin of the Plate is a white man's country; the basin of the Amazon is malarious, being in the tropics. That of the Plate is largely in the temperate zone; its northern parts are



ASUNCION, PARAGUAY

like Louisiana or Florida, and in the south the summer climate is as temperate as that of our Middle States. It is the Mississippi basin reversed, the source of its rivers being in the hot country, where there are coffee and sugar lands and rubber trees, and its mouth in the cooler lands of Uruguay and Argentina, noted for their fields of wheat and corn.

This vast basin is in the shape of a horseshoe, with the opening towards the Atlantic; the Andes and the strip of highlands that crosses Brazil form the back and upper rim of the shoe,

while the slightly sloping plains of Patagonia bound it on the south. In it are included the best lands of Argentina, all of Uruguay and Paraguay, and large portions of Brazil and Bolivia. Most of it has been built up by the Rio de la Plata system, and to-day the same rivers are still at their great work of earth-building. You see this plainly in the Rio de la Plata proper, which is more a great bay of liquid mud than a river. It is 120 miles wide at the Atlantic and narrows down to 29 miles at Buenos Aires; the width at Montevideo is about 65 miles.

At the docks at Buenos Aires you get some idea of the river traffic of the South American continent. There are boats of all kinds lying there; some have just come in loaded with oranges, wood, hides, and wool, and others are about starting out with passengers and freight for the interior. Some of the steamers are on their way up the Uruguay river; others are bound for the Paraguay and the branches of the Paraná. Upon some of the ships you can go into the heart of Brazil, a distance of more than 2,500 miles, and quite large steamers will take you up to the town of Asuncion. There are two lines of steamers which have a weekly service between Buenos Aires and Asuncion. The ships draw about ten feet, for steamers of sixteen feet can go no farther than Rosario, owing to the sand-bars of the Paraná.

We see it sometimes stated that the Paraná system is such that the largest ocean steamers can ascend it far into the interior of South America. This is not so. My ship, the *Saturno*, which drew only ten feet, was stopped at night again and again, fearing contact with the sand-bars. There is no good chart of the Paraná river and it is as changeable as the Mississippi. It is always building up and tearing down bars and islands within its channels. The waters carry so much mud that a snag will form a bar and a wreck will in time build up an island. One of the largest islands in the river near Rosario originated in a submerged hay barge, and farther up the stream there are hundreds of islands the soil of which has gathered about the water-logged trees which have floated down from the forests of Paraguay and Brazil.

Let us in imagination take a trip through the thousand islands of the Paraná. You may have seen the thousand islands of the St. Lawrence, but they are nothing in comparison with

the myriad islands of this wonderful river. There are, indeed, so many islands that they have never been counted. The river for hundreds of miles is a great inland sea, so wide in places that among the islands you cannot see its banks. Some of the islands are covered with willows, feathery reeds line their shores, and gnarly trees hang down low and mirror themselves in the water. Others farther up the river are forest grown. Few are cultivated, although it has been said that there is enough good



THE "SATURNO" STEAMER ON THE PARANA RIVER

soil upon them to raise food for all Europe; upon a few there are cattle and sheep.

Most of the islands are great fields of grass; some of which are not fixed, but floating; they glide by our steamer down the river almost as fast as we steam on our way up. The floating islands are called camelots; they are masses of grass, weeds, and flowers which the rushing floods have torn from their foundations and are carrying down to the sea. Some are so firm that they will support a man, and upon them tigers, jaguars, and snakes are often carried to the islands about Buenos Aires.

Just after leaving Buenos Aires we passed through the delta of the Paraná. This delta is about 20 miles wide, and it extends up the river as far as Rosario, a distance of 300 miles. It is peppered with islands, some of which are covered with forests of peach trees, and others with gardens kept by the Italians who supply the markets of Buenos Aires. Many of the houses are raised upon piles, to be out of the way of the floods and the tides, when they carry, as they sometimes do, great waves in from the ocean.

At the entrance of the Paraná we pass the island of Martin Gracia, the Gibraltar of the Rio de la Plata, which once belonged to Uruguay, but which is now the property of the Argentine Republic. It has a naval school and a fort upon it, the batteries of which are worked by electricity. It is one of the historic points of the Rio de la Plata, and as we go past it we recall the fact that the tour we are about to make was first made by the white man who was the earliest to set foot on the soil of the continent of North America. Sebastian Cabot, in 1526, ploughed his way through this same labyrinth of islands, and after a long voyage on the Paraná reached the Paraguay and ascended it to a point some distance beyond Asuncion.

If Sebastian Cabot could take a trip on the boats which now sail up the Paraguay, he would think them more wonderful than anything he saw in his travels. His voyage was made in a sailing boat; ours is in a comfortable steamer of 800 tons. It took him months to sail up the river, but we make the trip in six days. His lights were tallow dips, ours are incandescent globes, lit by electric dynamos. The *Saturno* was built in Glasgow and it is as comfortable as the average passenger steamer of the Great Lakes or the Mississippi. The cabins are good and the dining-room is like a parlour. The fare is not expensive, \$60 paying for the round trip, or an average of about five gold dollars per day.

The meals are not bad, but the Yankee stomach finds it hard to accustom itself to the times at which they are served. The first breakfast given on vessels is nothing but three swallows of coffee and a crust of bread and butter. At 11 A. M. a real breakfast is served, and at 6 P. M. comes dinner. Sandwiched between luncheon and bedtime there is tea at 3 P. M. and at 9 P. M. The breakfast at 11 A. M. and the dinner are much the same. The

breakfast begins with soup and ends with fruit, cheese, and coffee. As to the dinner, — well, here is a sample dinner bill of fare :

Ox Tail Soup	
Bologna Sausage with Potato Salad	
Puchero (the meat that was cooked to make the soup)	
Fish	
Curried chicken and rice	Beefsteak and Potatoes
Cheese	Guava Jelly
English Walnuts, Almonds, and Raisins	
Oranges	Black Coffee

The meals are very much alike, but we always had a variety as great as that of the above bill of fare. Two kinds of wine are served with breakfast and dinner without extra charge. Dinner is the chief event of the day, and the passengers prepare for it. The men put on their black clothes and most of the women wear evening dresses. The passengers are well dressed, but their manners are peculiar. Some of the men who wear kid gloves all day and put on black coats for dinner eat with their knives and tuck their napkins in at the collar as though they were babies and needed bibs. The toothpick is universally used between the courses. The men smoke cigarettes during the meals and with their coffee. I notice that one apparently elegant lady makes no scruple about expectorating on the floor between bites. One old Argentine papa, who has two pretty knife-eating daughters, drinks his soft-boiled eggs out of a glass. He also polishes his plate with his napkin at every course, but I don't blame him, as I do that myself; it is a necessity on the Paraná. Most of our passengers are rich Argentines, on their way to Paraguay for the winter; they go there for the season, as we go to Florida, to get away from the cold. All speak Spanish, and, with the exception of ourselves, there are no English or Americans.

Shortly after leaving Rosario we entered the wheat region of the Paraná basin. We passed big mills and grain elevators as well as towns which owe their existence to the wheat-fields. We passed between the provinces of Sante Fe on the left and Entre Rios and Corrientes on the right. Sante Fe wheat is known all over the world. The province is larger than New York, and its business is wheat-raising.



INDIANS OF PARAGUAY

Entre Rios and Corrientes are bounded on the east by the Uruguay River, being embraced by the Uruguay and Paraná. This fact has given them the title of the "Argentine Mesopotamia." They are very rich, and their soil is of wonderful fertility. Each is of about the size of South Carolina. Entre Rios is growing very fast; it now has about 250,000 people, and upon its pastures 4,000,000 cows and about 5,000,000 sheep are feeding. This is an average of 20 sheep and 15 cows for every man, woman, and child in the province. At five to the family it would be 100 sheep and 75 cows per family. Suppose we had a State every family of which possessed 100 sheep and 75 cows; it would be the banner State of the Union. The stock, however, is not equally divided, and much of it is in the hands of large holders.

The Paraná is one of the grandest rivers in the world. Its beauties increase as you travel up its waters, and the quiet picturesqueness of its surroundings grows upon you. The sunsets are gorgeous, painting the clouds in every colour and shade of rosy pink and gorgeous red, and often making a great golden canopy over the dark blue Paraná. The morning sun strikes the dewdrops upon the fresh green fields and feathery grasses and gives you a shower of diamonds on an emerald field, while at night the heavens and earth are clad in the wondrous glories of the semi-tropics. You look among the stars for the Southern Cross and wonder at the tropical brilliancy of the Milky Way.

As you travel towards the equator the vegetation changes; the trees are larger, the grasses are more luxuriant, and the islands have great bunches of feathery green and ferny bamboos. The country grows wilder; now you see a white farmhouse cut out of the forest, and now stop at a little town of thatched huts and one-story brick buildings roofed with red tiles, with a church spire invariably rising above them. After three days' journey you come to Corrientes, and then leave the Paraná for the river Paraguay.

The Paraguay is not so wide as the Paraná. Between Corrientes and Asuncion, a distance of two or three hundred miles, the banks are not wider, I judge, than those of the Mississippi above St. Louis, but the waters are equally deep. The river seems perfectly navigable. You often go so close to the banks that you can see the birds of brilliant plumage which inhabit the woods. There are many crocodiles, and you now and then get a shot at one as it scuds through the water to swim out of the

way of the boat. There is plenty of shooting; flocks of wild ducks rise from the bends of the river, and from the lagoons, at every few miles, curious birds fly about the steamer. Along the left bank of the river, in the Chaco, there is little else than virgin forests, and you are told that the woods are inhabited by jaguars, and that you could not travel a mile back from the



ALONG THE BANKS OF THE PARAGUAY

coast without meeting tapirs, peccaries, monkeys, and wild hogs. The Paraguay side is also wild, save that, here and there, you pass little towns at some of which the ships stop to load and unload freight. You now get your first sight of the Paraguayan people, of whom you meet more and more as you sail onward, and finally come to anchor in the Bay of Asuncion, at the wharves of the capital of Paraguay.

CHAPTER XLIII

IN THE CITY OF ASUNCION

A WALK THROUGH THE CAPITAL OF PARAGUAY—A TOWN OLDER THAN ANY IN NORTH AMERICA, BUT STILL NEW—ITS TELEPHONES AND TELEPHONE GIRLS—A GENERAL VIEW OF PARAGUAY—ITS CITIES, TOWNS, AND VILLAGES—ITS QUEER COLONIES, ONE OF WHICH WAS NAMED AFTER PRESIDENT HAYES.



COME with me this morning and have a look at the capital of Paraguay. It is now summer; the people are moving about in cottons or linens, and at midday the earth seems to steam. The children go to school very early and everyone rests or doses at noon. The mornings and evenings, however, are pleasant and we shall be comfortably cool in the mule cars which take us to all parts of the city.

But first let me say a word about Asuncion. She is the oddest municipal maiden on the South American continent. She is the social, political, and industrial mistress of all things Paraguayan. She has the government buildings, the colleges, the banks, and chief business houses, and still she is so small that she might be hypodermically injected into the cheek of Chicago, and would hardly raise a pimple on that fair lady's face.

Asuncion has only about 30,000 people. Her buildings are almost all small; they are chiefly one-story houses, and outside the government structures there are not 200 of them more than 30 feet high. The Paraguayan who lives in a two-story house struts about like a king, while the owner of a three-story block is a nabob.

Still this maiden, Asuncion, is wonderfully beautiful. Mother Nature has clothed her in the brightest of dresses. In her gardens lemons and oranges grow; great palm trees throw their shadows upon her, and the amorous waters of two mighty rivers lave her feet. She is seated on the high east bank of the Paraguay river, just opposite the mouth of the winding Pilcomayo,

which has flowed down from the Bolivian Andes 1,500 miles to get to her. She is situated in the centre of the west border of Paraguay proper, in a good position to command the whole country of which she is the capital.

I get my best idea of Paraguay by thinking of Illinois. It lies on the South American continent in much the same position that Illinois does in North America. It is at the junction of two rivers; along its west side is the Paraguay river, which corresponds to the Mississippi, and on its south and southeast is the



THE CAPITAL OF PARAGUAY

Parana, corresponding to the Ohio. Both the Paraguay and the Parana are navigable for large river steamers, supplying a broad waterway from here to the Atlantic, similar to that of the Mississippi in its course to the Gulf of Mexico. Paraguay proper is just about as large as Illinois. It is 375 miles long and about 200 miles wide, including all the land lying east of the Paraguay river. There is a vast wilderness on the other side of the stream, called the Chaco. This is the wild west of Paraguay. It is inhabited by Indians and wild animals, and is said to possess vast forests and extensive pastures, but not much of it is as

yet explored. Paraguay proper is not unlike Illinois in character. It has excellent soil and good pastures. The face of the country is rolling; in some places there are low mountains which furnish numerous streams, so that you can hardly fence off a farm without including good water.

It is in Paraguay proper that the greater part of the people of Paraguay live. They are the offspring of the Indians, united to some of the best of the Spaniards who settled South America. One of the first cities established on the continent was Asuncion;



COUNTRY CART, PARAGUAY

it was built seventy years before John Smith landed at Jamestown, and the Spanish-Indian babies born then were gray-haired before Boston sprang into being. Paraguay was for years the leader of wealth, civilization, and culture in this part of the world, and it was not until the close of our Civil War that it fell out of the race. It then had a fight with its neighbouring republics, Brazil, Uruguay, and Argentina, which lasted five years and killed off almost all the men. This ruined the country. A report went abroad that it was desolate, and the bulk of the European immigration since then has gone to Argentina, Uruguay, and Brazil.

There are to-day less than 10,000 foreigners in all Paraguay. I have an estimate from the Secretary of State which shows that it has only 5,000 Argentines, 2,000 Italians, 600 Brazilians, and 800 Germans. The remainder are French, Swiss, Americans, and English. In addition to these there are 600,000 native whites and mixed breeds; and there are about 130,000 pure Indians. There is so much Indian blood mixed with the white that it is hard to tell where the red man's blood ends and that of the Caucasian begins. You see a dash of gingerbread in the complexions of



PORT OF ASUNCION, PARAGUAY

most of the people, and the language generally used is that of the Guarani Indians. It is a beautiful language, more soft and melodious than even the Spanish, and is used by everyone outside the cities.

I have said that Asuncion has 30,000 population. The average Paraguayan considers it a very large city. In my travels I have gone through the best-settled parts of the country and am surprised at the fewness of the people. There are many villages, but only some very small cities. The cities are much smaller than the books would lead one to think. The "Statesman's Year

Book" mentions a number as containing from 5,000 to 20,000 inhabitants. Those I have seen have not one-third the number claimed. I spent some time in Villa Rica, which is in the interior, about a hundred miles east of Asuncion. It is put down as having 19,000, but I venture to say that it has not one-third that number. Villa Concepcion, which is 250 miles north of Asuncion on the Paraguay river, has certainly not 10,000 people, and Villa Encarnacion, the largest town in south Paraguay, is not nearly so large.

The towns are composed of thatched huts from fifteen to twenty-five feet square. The smaller cities have one or two



• THE HOUSES ARE OF MUD AND POLES, THATCHED •

streets of one-story brick dwellings, the walls of which are covered with stucco and roofed with red tiles. Some have walls of stone and others are roofed with palm bark. The larger cities have parks or plazas, but outside Asuncion none has paved streets or any modern improvements. Even Asuncion is still lighted by coal oil, and but few of its people ever heard of a sewer. The sanitary arrangements of many of its houses are filthy, those of the chief hotel, for instance, being dirty and unhealthy in the extreme.

Although Asuncion is older than any city in North America, it appears delightfully new and bright; its streets cross one an-

other at right angles, and they so slope toward the river that every good rain gives them a washing. They have sixty inches of rain here every year, and when it does rain it pours. Only a few of the streets are paved; most of them are of red sand, so that the city has a rose-tinted foundation.

Let us notice the houses. They are built close to the sidewalks in solid blocks, forming one-story walls along the street, with here and there a door or an iron-barred window. You can tell the different houses by their colours; some are painted rose pink, some sky blue, some blood-red, and others of all shades of yellow and green. We are now going towards the post office; it is of a light lavender tint. On our way we pass a market-house painted rose pink, and a little farther on there is a cathedral the colour of rich Jersey cream. Even the public buildings are painted. The president's palace has a tinted exterior, the houses of congress are of a delicate lilac, while the official newspaper is printed in a monastery-like structure of Indian red.

It seems odd to think of newspapers in Paraguay; but there are newsboys everywhere, poking their dailies under your nose. The papers are printed in Spanish, and sell for about two cents of our money a copy. They are folios of the old blanket-sheet shape, containing little news but huge advertisements; here is one that has telegraphic dispatches, including cables from Washington and Rome. Asuncion has a telegraph line connecting it with Buenos Aires, whence its dispatches are sent to all parts of the world. There are also wires to the interior, which are patronized to such an extent that 46,000 messages were received last year.

Asuncion is equipped with telephones, which are owned by a stock company that pays dividends of twenty-four per cent per annum, though its telephone rates are lower than any in the United States. The company charges business houses \$2 gold per month, and for telephones in residences the monthly charge is only \$1.50 in gold. A visit to the central station is an interesting sight. The "hello girls" of Paraguay have even sweeter voices than our own hello girls, and some of them are quite pretty. Most of them go about in their bare feet, and their low-neck dresses are as white as the orange blossoms which they wear in their hair. There are orange trees just back of the office, so

that the flowers are ready at hand. The girls are standing up at their work, making the connections by putting pegs in and out of a wall of numbered holes, thereby bringing together the various customers. I ask the manager as to their salaries and am told that each girl receives about \$6 gold per month, or \$1.50 per week.

We see tram-cars on the principal streets of Asuncion. The cars are open at the sides and are so roughly made that they seem to have been chopped out with a hatchet. Each is drawn by three mules, which go on the dead gallop, and the cars run so far apart that you often have to wait half an hour for a ride. The different lines connect the wharves with the railroad depot and with the suburban towns. They are well patronized, but are not paying investments.

It is the same with Paraguay's only steam railroad. This was built under a guarantee from the government by English contractors. The English made money out of the job, but the road has paid no dividends since it was opened. It extends about 156 miles into the interior, connecting Villa Rica with Asuncion, and will be extended, it is said, down to the Paraná river. Another line which is talked of, but which I fear will not soon be constructed, is to run from Asuncion to the Atlantic port of Santos, Brazil. Such a road, while very expensive to build, would open much good country and would probably have a large traffic.

One of the strangest things in Paraguay is its money; it is a paper currency, poorly printed, and on poor material. It now comes from Germany, and is not nearly as good as the old paper money which was made in the United States. The bank notes are of all denominations, from five cents to a hundred dollars, and they are at such a discount that a Paraguayan dollar is now worth about thirteen cents of our money. The banks of Asuncion handle the "stuff" by the basketful. They cord it up like rags, but their profits from it are large. Indeed, it seems to me that there is a chance for some of our idle American funds in banking in Paraguay. The usual rate of interest outside the banks is fifteen per cent, and in the banks you cannot borrow money for less than one per cent a month. The usual discount rate is twelve per cent, and a bank gives no favours without receiving a money compensation. As a result, the banks pay large

dividends. Take, as an example, the Mercantile Bank of Paraguay, upon which I have letters of credit; this bank paid a dividend of sixteen per cent last year, and its president tells me it has never paid less than ten per cent. Its capital is only \$120,000 in gold, and yet its business last year amounted to \$2,000,000. The Territorial Bank, which has a capital of \$70,000, paid a dividend of twelve per cent last year, and the private banks have done even better. From these figures it will be seen that it takes quite a sum of money to do the business of Paraguay.



THE POST OFFICE, ASUNCION

There is now \$8,000,000 or \$10,000,000 of Paraguayan money in circulation, the value of which the government is trying to increase by withdrawing a certain amount of the paper every year. It takes about \$5,000,000 annually to "run" the government, and the exports and imports annually amount to about \$14,000,000 in gold.

As to the banks, one of the most striking financial institutions of Paraguay is the Agricultural Bank, which is managed by the government; it is a bank and an agricultural department combined. Its business is to help along agriculture by introducing

seeds and tools, and by loaning money to farmers on farm property. It has a capital of about \$500,000 in gold. It loans on about half the assessed value of the property, charging what is here considered the very low interest rate, viz., eight per cent. Connected with it there is a warehouse filled with farm implements and seeds. The officials say that the institution is a success, although such banks in other parts of South America have been failures. This banking scheme is one by which the Paraguayan government is trying to build up its farming interests. The government also offers inducements to immigrants, giving each new settler some agricultural machinery, eighty acres of land, and a loan of twelve cents per month for seven months for each adult and nine cents for each child. It gives each immigrant a milch cow, oxen, and seeds, and also agrees to pay his passage from Buenos Aires to Asuncion. There are strings attached to some of the above gifts by which the immigrants pay back in instalments all they receive outside the land.

The immigrants who come to Paraguay settle in colonies, and not upon their farms. There are scattered over the country perhaps a-half dozen colonies composed of different nationalities. There is one not far from Asuncion, called Bernardino, which is populated by Germans. There is another of Australians, who got up a brotherly love scheme and came to Paraguay to live after the Golden Rule. They began enthusiastically by chartering a ship, each selling his property and putting the money into the general fund. In order to cut down the expense, they divided the work on the voyage among the different members of the colony: they had, however, hardly left Australia before the Golden Rule was kicked higher than Gilderoy's kite, and when it fell it came down in a thousand pieces. These brotherly and sisterly lovers acquired a pleasant way of throwing the dishes at one another during the voyage, and by the time they reached Asuncion they were quarrelling with one another as discordantly as strange parrots. As a result, they soon became disgusted with themselves, and their lands have now been re-divided.

A colony of special interest to the United States is situated just across the river from Asuncion, in the Chaco. This was named after President Hayes, because he decided a territorial question between Argentina and Paraguay in favour of the latter. The colony is called Villa Hayes, but they pronounce it here as

though it were spelt Villa Eyes, for that is the way the Spaniards pronounce Hayes. This colony, named after our late good President, who, it will be remembered, shuddered when it was proposed to put Roman punch on the White House table, is largely engaged in cultivating sugar cane and distilling its juice into a rum so villainous that it will kill at forty rods. Inasmuch as rum is an article that is always in demand in all parts of Paraguay, the colony is probably in a good financial condition.




VIEW ON THE UPPER PARANÁ, PARAGUAY

CHAPTER XLIV

THE PRETTY GIRLS OF PARAGUAY

STRANGE CUSTOMS OF A LAND WHERE THERE ARE MORE WOMEN THAN MEN—
THE WAR WITH BRAZIL, THAT KILLED OFF THE MEN—HOW THE WOMEN
MANAGE THE COUNTRY—THEIR BUSINESS ABILITY—A VISIT TO THE
MARKETS—ORANGE GIRLS AND BUTCHER WOMEN—A LOOK INTO A PARA-
GUAYAN HOME—PARAGUAY TOBACCO, USED BY WOMEN AND CHILDREN, WHO
BOTH SMOKE AND CHEW.

 PARAGUAY is the paradise of South America. Its climate is delightful; its semi-tropical vegetation is as luxuriant as that of the Garden of Eden, and it has about three Eves to every Adam. I have never been in a country where there are so many women. They swarm; they walk by you and with you on the highways and byways, and there are so many that you find it difficult at times to get out of their sight.

The women of Paraguay are so much in the majority that they do the work of the country; they are the buyers and sellers of every community; outside the cities the men are the drones. Any bachelor in the United States can find a wife in Paraguay if he wants one, for the men are now so few that any two-legged animal of the masculine gender will here be greedily pounced upon. The sexes were once about equally divided, but Paraguay had a war which killed off the men. This occurred before the close of our trouble between the North and the South; at that time Paraguay was the leading country in this part of the world; it was about the richest in South America, and its wealth and influence angered Argentina, Uruguay, and Brazil. They combined against it and their joint army attacked the Paraguayans. The struggle lasted five years, but it ended in the wiping out, as it were, of the Paraguayan men. It is said that 100,000 of them died in battle, and that thousands of women and children were starved to death. It is difficult to obtain accurate figures in any South American country, but, according to the best

estimates, the population of Paraguay was so cut down by this war that there was only one man to six women, while another statistician states that three-fourths of all the people in Paraguay, numbering about 800,000, were destroyed. When the war ended there were but 200,000 left, of whom only 25,000 were men and 106,000 were women over fifteen years of age; the remainder were children. Paraguay thus became a land of women, and nature seems to be keeping it so. Since the war occurred I have been told that more girls have been born every year than boys. In Asuncion the girl births exceed the boy births by more than five to the hundred, and outside the city the percentage of girl babies is even greater.

Most of the women of Paraguay are poor; many of them are hewers of wood and drawers of water; but there are some who are rich. There are class distinctions here as everywhere, and the people of the better classes dress and act much the same as do those in other parts of the continent. Paraguayan high-class ladies wear clothes not unlike those of our American girls. They wear bonnets or hats when out on the streets, and a few of them actually import their dresses from Paris. They speak Spanish when in society,—at least, when on dress parade,—and some are so well educated that they are able to read both English and French. Such women are usually interested in politics, and, through their husbands, have much influence on what is done by the government. They are good housekeepers, excellent wives, and are, I may say, the equals of their sisters in any part of this continent.

Many of the Paraguayan women are very good looking. This is true of all classes, but especially so of the young. The typical Paraguayan maiden is a trifle under middle height. She is as straight as an arrow and as limber as a willow tree branch, though inclined to the voluptuous in form. Her complexion is of the brunette order, and sometimes of the reddish-brown of the Guarani Indians, for she has, as a rule, more or less Indian blood in her veins. When the Spaniards came here the country was inhabited by the gentle and semi-civilized Guaranis. The two races intermarried; their descendants took wives from the same tribes, so that to-day there are comparatively few Paraguayans who have not a large proportion of Guarani blood. The Indian mixture has resulted in the adoption of many Indian

customs, and the language most spoken by the people to-day is the Guarani. In the country districts nothing else is used, though there are notices on the walls of the Asuncion schools that scholars must not speak Guarani during school hours. The Guarani is a soft language, and the Paraguayan girls have sweet voices.

One of the chief industries of the Paraguayan women is lace-making. It is true that the lower classes do all kinds of work, but all the women make beautiful lace: they spin as delicately as spiders, and every house is full of beautiful cobwebs made by its women. They make lace handkerchiefs, fichus, and embroideries, and weave great hammocks of thread so fine and so strong that they will often outlast a generation. They have patterns of their own which they have taken from nature; one of the most beautiful is called the cobweb pattern, the threads of which are as delicately joined as though made by one of the big spiders to be found here in the semi-tropics. Some of these handkerchiefs are of silk, others are of linen, while others are of fibre grown in the country. It takes a long time to weave them, but there are so many at work that they are wonderfully cheap, so that an article upon which a month or so has been spent can be bought for five dollars and upwards of our money. A good hammock will cost you ten dollars, and a shawl perhaps twice that amount.

Paraguay is a land of oranges. It is perhaps the only place in the world where the orange grows wild. There are oranges in every thicket and in almost every forest; the villages are built in orange groves, and there are so many oranges that they often rot on the ground. The fruit is delicious; it is, I believe, the best of its kind, and is eaten by everyone. The orange girls are among the picturesque features of Paraguay. You meet women peddling oranges at the stations; you find them surrounded by piles of golden fruit in every market; and all along the Paraguay river they are to be seen carrying oranges to the boats, which are to convey them to the markets of the south. It is estimated that 60,000,000 oranges are annually shipped down the Paraguay river to Buenos Aires, and the loading of the fruit is one of the sights of the voyage. As we came up to Asuncion we found mountains of oranges on the shores at every town, with hundreds of Paraguay girls kneeling before them

packing them in baskets, while other hundreds were carrying them to the steamers.

The scene is one that you cannot witness outside the country. Stop with me at Villa Pilar and look at it. Villa Pilar, has about 10,000 inhabitants: it lies on the east bank of the Paraguay river, a day or two's ride below Asuncion. As the steamer stops at the landing we notice that every garden has its orange tree and that the trees shade the streets. We see ox carts coming in from the orchards creaking under their golden loads. Each cart holds about 5,000 oranges, piled loosely within it like so many potatoes. The driver directs his oxen to the piles of oranges on the bank, backs his cart against one of them, and dumps out the fruit just as our workmen dump dirt when repairing the roads. Oranges are indeed worth little more than dirt here; that whole cart full will sell for \$5, and one can buy all he wants for two cents. And yet every orange is counted; those women on their knees, who are putting the fruit into the baskets, count as they work, and a careful tally is kept.

The women who carry the oranges on board balance their loads on their heads, and walk with them over a gangway to the steamer. There are a hundred women at this work now, and the ship is already so loaded with oranges that a wire netting has been stretched about its deck like a fence and the fruit piled up within it. The deck is so filled with oranges, in fact, that the sailors are moving about on boards which have been nailed up above the piled-up masses of the fruit.

Stop and take a look at the girls. They are passing to and from the bank and the steamer over that roadway of boards 500 feet long. Each has a round basket, carefully poised on her head, and in and above them the golden oranges rise. The girls are dressed in white gowns and the breeze that sweeps up the river wraps their thin skirts about their lithe forms. Still they walk without touching their burdens; the shaking of the planks and the breeze from the river do not seem to disturb them. As you look, you cannot help admiring the typical Paraguayan maiden; she is so well formed, and she walks like a goddess. When young she is as plump as a partridge in autumn, and were it not for some of her ways you might straightway fall in love. To an American her attractiveness is spoiled by the use of tobacco. Until I came here I thought that there was no greater beauty-destroyer

than the gum-chewing of the American girl, but the smoking of cigars, as it prevails among Paraguay women, is far worse. The Paraguay maiden smokes like a chimney. She begins to use tobacco when she first wears dresses, and even before, for you may meet girls of six, eight, and ten years of age with cigars in their mouths. I have seen scores of little girls of seven and eight smoking cigars almost as big as their wrists, and as for old women, it is the exception to find one in the country districts who does not smoke from morning till night. I speak, of course, of the common people. Those who are not actually smoking have cigars between their teeth, which they chew without lighting for hours at a time. Many make their own cigars. Tobacco is so cheap here that you can get a dozen fairly good cigars for five cents; leaf tobacco is sold for a few cents a pound.

The Paraguay girls remind me of the girls of Japan. They look not unlike them in feature, and their luxuriant black hair is of the same character as that you see in Japan. In the inland districts they have the disregard for clothing which one finds in the land of the Mikado. Very young girls, and often some of the age of fourteen, wear nothing whatever. The Paraguayan woman, like her Japanese sister, is not afraid of strangers; she is always good-natured and will laugh and joke with you just as readily as do the young women of the east coast of Asia.

The Japanese women are good at business; this is true also of the Paraguayans. If you would see smart women traders, come and spend an hour in the market-place of Asuncion. The market is situated in the heart of the city; it covers an entire square, and looks more like a monastery than a place for buying and selling. Its roof extends out over cloisters ten feet wide, back of which is a tier of cells running about a hollow court and forming the walls of the market-house proper. The court, the cells, and the cloisters are filled with women. There are hundreds of them, all in their bare feet; many of them I found squatting on the bricks with their wares before them. Others stand behind butcher counters, and others still have little tables covered with vegetables, laces, jewellery, clothing, or shoes.

Stop now and notice the buying and selling. There are no scales or measures. That vegetable woman has a stock of green peas; she has arranged them in piles, about a pint to the pile, and sells by eye measure. The butcher woman behind her is

cutting off meat in great strips. The customers judge what each piece is worth by its size, for all meat is sold by the chunk. But let us go farther into the market and take a look at the butchers. They are women, who stand in stalls with pieces of beef on their counters and strips of beef hung up on hooks at the back. The favourite cut is a strip, and much of the meat seems to have been cut from the animal in sheets; so the people



PARAGUAYAN WOMEN

buy, as it were, by the yard. The usual method is to tear or cut the meat from the animal's sides and back in layers about half an inch thick, one layer after another being cut off until the bone is reached. The sheets are then hung up in the market and sliced or chopped off as the customer desires. Each customer brings a cloth with her to wrap her purchase in, and she carries it home in a basket, box, or pan, which she rests upon her head. No market-woman ever furnishes paper or

string for her customers. The most common market-basket is a dish-pan or tin wash-basin, and this is always carried on the head. Indeed, the head is the place of burden for all Paraguayan women. At the corner of the market we can see all sorts of burden-bearers coming and going. There comes a girl now at a "two-forty pace," with a demijohn on her head and a load of wood in her arms. Her black face is wrapped in a black shawl and her black legs show out under her white skirt half way below her knees. There is another woman with a white sheet round her head and shoulders. Notice the platter so carefully balanced upon her crown; it is filled with oranges and vegetables, and there is a great chunk of raw meat on top. She walks along without touching her burden, and that is the case with all the women about. There comes a young girl with a bundle of sticks perfectly poised on the top of her cranium; she has her hands at her sides: she has bought as much firewood as you could hold in your arms, and she is carrying it home. Behind her is a young mother with a similar bundle and a baby in her arms. See, she has stopped to make a purchase of that orange-peddler over the way. Notice how carefully she stoops down without bending her back. There she has picked up a-half dozen oranges and stuck them in among the firewood and is walking off without the least trouble. But wait, the woman of whom she has bought is excited; she is calling her back. The young mother returns and putting her hand away down inside her chemise, takes out a coin and gives it to the peddler, who in turn drops it in at the neck of her dress. The bosoms of the women are their pockets, and before they make change they often have to fumble for some time for the coins.

And so we go in and out through the crowd, jostling and being jostled by women with bags of potatoes, baskets of corn, firewood, and bottles on the top of their heads. We beg pardon at every step, for we fear that a push may throw a basket of eggs to the ground, or that a chunk of raw meat on some woman's head may fall at our feet. There is no danger, however, for every woman handles her burden quite as well as though she were carrying it in her arms.

The market is a good place to see how little a poor Paraguayan family needs in order to live. Everything is sold in small quantities, and it cannot cost much for the average woman to keep

house. The clothes of the poor are exceedingly scanty. The common women go barefoot and all go bareheaded. It does not cost much to dress them, for a full suit can be bought for \$2 in gold. Nearly all wear shawls about their chocolate or cream-coloured faces. Some have the shawls thrown back, so that you can see that the low-cut chemise, which reaches to the feet, forms the bulk of the clothing. The shawls look like bed sheets, and I am told that they are often used as such and that a woman takes part of her bed for her clothes when she goes out to walk.



A PARAGUAYAN MARKET-PLACE

The common people have but few wants. They do not seem to care much for money and think that one who works like a foreigner is very foolish indeed. I venture to say that the average Paraguayan family does not spend as much in a year as one of our labourers in the North spends in a month. The houses outside the cities are huts of poles, chinked with mud and roofed with brown thatch. They have dirt floors, and commonly have neither fences nor gardens. The usual hut is not more than fifteen feet square, but it often has an open shed of the same size joined to it. As it is warm, the shed is frequently the most


comfortable part of the house. There is little furniture; a hammock or so, one or two cot beds made of canvas and stretchers, a table, and a couple of chairs, form a good housekeeping outfit.

The cooking is often done over an open fire in the shed, and cook-stoves are not common. The chief meals are breakfast at 11 o'clock and dinner at 6, with a cup of "mate" or Paraguayan tea in the morning. The food is chiefly puchero, a soup of boiled beef and vegetables, and mandioca, a kind of a potato-like root, which is dried and ground into a flour. The soup is usually eaten first and the boiled beef and vegetables brought in as a second course. Very little coffee or tea is drunk at meals, and the only liquor used by the common people is a villainous rum made of sugar called caña.

CHAPTER XLV

INDUSTRIAL PARAGUAY

ITS RESOURCES AND POSSIBILITIES—A LAND OF VAST PASTURES AND MANY CATTLE—ITS DENSE FORESTS OF VALUABLE HARD WOODS—ITS TOBACCO AND COTTON FIELDS—LOW PRICES OF LAND—THE CHANCES FOR AMERICANS AND AMERICAN TRADE.

 PARAGUAY is one of the least developed of the countries of South America. During recent interviews with the President and Secretary of Foreign Affairs, I have had the present condition and the possible future of the country laid before me. They estimate that Paraguay could easily support ten times its present population. It has now 700,000, but according to them it could easily feed 7,000,000 and still leave much of the country uncultivated and unused. At present not one acre in twenty of the tillable land is under cultivation, and there are vast areas of pasture which are awaiting stock-farmers.

Stock-raising is the chief industry of Paraguay. Much of the country contains natural pasture fitted especially for stock-raising. Upon it the grass is green the year round. There is water everywhere, so that the cattle need but little care except at the round-ups. Every year the marketable stock is picked out and driven to Asuncion for sale. There is a demand for the meat as well as the hides, for although Paraguay has about 2,000,000 cattle, it does not raise enough beef for its own consumption.

The Paraguayans are beef-eaters; they eat the meat fresh, and are especially fond of beef when dried and salted. As you ride through the country you see strips and sheets of beef hanging on poles in front of the houses, swaying to and fro in the breeze. They are thus hung out to dry, for in this region the air is the only evaporator and refrigerator. It is of such a nature that the meat, when properly exposed, becomes as hard as a bullet, and can be laid away for future consumption. When so dried it is in special demand throughout Spanish America and in



many markets will bring more than fresh meats. It is used for stews, being cooked with rice, potatoes, and mandioca.

The stock farms of Paraguay do not compare in extent with those of Argentina or Uruguay. The cattle are of a lower grade, and the profits accrue from the excellence of the grass and the mild climate rather than from good management or fine breeding. Nevertheless, the natural increase of the stock is from 25 to 35 per cent annually, and from 80 to 90 per cent of the number of cows. Cattle now sell at about \$10 per head, higher prices being paid for good fat beeves.

Pasture lands, and indeed all lands in Paraguay, are sold by the square league, the square league here containing 5,760 acres, or about 1,000 acres less than the square league of Argentina. Land sells all the way from \$100 gold per league upwards. At \$100 a league would be less than two cents an acre, and of course only the poorest of land can be purchased at that price. Good grazing land has recently been sold, however, at \$700 a league, and by watching the auctions fairly good pastures can be purchased for even less. Such lands, however, require fencing to make them usable. It is estimated that a league of pasture should feed 1,500 grown cattle.

I should say, however, that no purchases of Paraguay lands should be made by our people without personal investigation. The would-be American investor should come first and study the conditions. He should not buy land without seeing it, as there are large swamps in some parts of the country, and much of the lowlands are covered with water in the rainy season.

A large part of Paraguay is natural forest. This is especially so on the hills and on the Chaco. The forests are full of fine woods; but the wheels of Dame Fortune's lumber car in South America are clogged with natural difficulties, which can be understood only by those on the spot. There is a demand for lumber in all South American countries. I found Oregon pine at the ports of the Pacific coast and Maine pine in the Argentines and even at the Strait of Magellan. Our pine is carried more than 6,000 miles by ship to the Buenos Aires markets. Here in Paraguay the forests are right on the river, 1,115 miles from Buenos Aires, with water communication as good as that of the Mississippi between the two points. You would think that all the lumber of the Rio de la Plata basin would come from

Paraguay; but it does not. Why? Because it costs so much to get the lumber out to the river, and to carry it down to market.

The Paraguayan woods are almost all hard. They are as heavy as iron, so that when you put a log on the water it sinks to the bottom. There is no means of getting lumber from the interior to the river except upon the railroad, where freights are high, or on boats on the little streams which are tributaries of the Paraguay. Lumber carriage is paid for by the pound, and the freights take the profit out of the business. Labour is low, as far as daily wages are concerned, but as measured by results it is high. The men are lazy and inefficient. There is no machinery; the logs, therefore, are sawed out by hand, one man standing on top of the log and another under it, and thus working a cross-cut saw. Another drawback is that most of the trees are crooked, and it is almost impossible to get a straight log.

Nevertheless, some kinds of the native wood are wonderfully beautiful. Quebracho Colorado is as red as the dark moss rose. It is used for dye wood and tanning; there is a German firm that is now shipping a large quantity of it to the United States. The best quebracho comes from the west bank of the Paraguay river in the Paraguayan Chaco.

Another very hard wood is the lepacho; it will turn the edge of a steel axe. The lepacho is a very sound wood, not prone to crack, and of great strength. It is of a greenish-yellow colour, and some varieties have a curl in it like bird's-eye maple. It brings good prices. Lepacho would make very good furniture and so would many of the other hard woods of Paraguay. The black and red palms, for instance, would be valuable for veneering, for they take a high polish and are wonderfully durable. They will last for years underground or in the water, and are exceedingly hard. I should think that an American furniture factory established in Paraguay would pay well. The country now imports its furniture from Germany, Austria, and the United States. Both Uruguay and Paraguay get most of their supplies of this kind from the same sources, and the prices of all such things are remarkably high. I saw Michigan school desks being landed from a ship at one of the towns of lower Paraguay. Our desks and chairs are in demand all over South America, but owing to their high prices are not generally used. Paraguay has a very good cedar, much like that of cigar boxes, which could be



WOOD-CUTTING IN PARAGUAY

used for making furniture. A similar wood is the timbo, found in the southern part of the country. It has a grain much like cedar, and grows to a great height. It is very light, the Indians using it for troughs and canoes.

A curious product of the forests of Paraguay is Yerba Mate, or Paraguayan tea. We do not hear much of it in our part of the hemisphere, but it is the favourite drink of more than 20,000,000 people in South America, being consumed in large quantities in Argentina, Chile, Uruguay, Paraguay, and Brazil; in the latter country it is drunk even in the coffee districts. The amount annually exported netted over \$1,000,000, and vast quantities are used at home. Yerba Mate is made from the leaves of a shrub which grows wild in the forests over an area about as great as that of Connecticut. The Yerba woods are called Yerbales. They were once government property, but are now owned and worked by capitalists and stock companies. The leaves are gathered by Indian labourers, dried over fires, and packed in bags of green cowskin for market. It takes about thirty-six hours to prepare the leaves for shipment. When served, the leaves are in a powdered state. They are put in bowl-like gourds, and boiling water is poured upon them. After steeping it a moment the consumer drinks the liquor, sucking it up through a brass or silver tube, which has a strainer at the lower end to prevent the tea leaves coming through. The tea is bitter to the taste, but it is very stimulating and strengthening, quieting the nerves and allaying hunger. Many Paraguayan women drink from fifteen to twenty cups of it daily.

We should sell Paraguay cotton and woollen goods. At present 85 per cent of such articles are furnished by England and Germany. There is no cloth of any kind made in Paraguay. The black woollen shawls worn by the women come from Germany and Belgium, and the calicoes are chiefly from England. It is the same with hardware, most of that which is now sold here being German, although it is made after American patterns, and certain imitated articles are sold under American trade-marks. The impression obtains everywhere in South America that our hardware is the best; for this reason the Germans copy it, even to revolvers, axes, and sewing machines, the German imitations of the American makes being actively pushed. I find the Germans the most active commercial factor in Paraguay. They

have several large stores in Asuncion, and they send their travellers to the towns in the interior.

Paraguay has good soil for tobacco and cotton, and plantations for raising these staples might be established were it not that



A PARAGUAYAN TREE

there is no labour to work them. The Paraguayans do not want work; they are poor enough, it is true, but they despise over-exertion. They receive very fair wages for this continent, being

paid in Paraguayan dollars, each worth about fifteen cents. Bricklayers get five of these dollars, or seventy-five cents gold per day, carpenters the same, and common workmen about \$3, or 45 cents in our money. Trackmen on the railroad are paid about \$3.50 Paraguayan; engineers receive \$500 per month, and conductors are paid \$120 per month. The apparently high wages of the engineers are due to the fact that they are usually foreigners and have to manage the machinery. Collecting tickets is not skilled labour, and hence the conductors are Paraguayan. As to the wages of the women, house servants receive amounts equal to \$3 a month in gold, with board.

I doubt whether there are twenty Americans, all told, in Paraguay. There is our consul, a well-educated coloured man, who appears to have made himself popular with the government; the vice-consul, who is also agent for one of our life insurance companies; two American dentists, a druggist, and a few others.

An important part of the American colony is made up of missionaries of the Methodist Episcopal Church, a denomination which more than any other has done much to establish schools in South American countries. It has taken the continent as one of its chief fields of work, and has stations in Peru, Chile, Argentina, Paraguay, and Brazil. Most of its labours are educational, many children of the best native families having through its schools been brought under Christian tuition. Its schools in Asuncion are two, one for boys and the other for girls; both are excellent.

CHAPTER XLVI

ROUND ABOUT PIRAPO

STRANGE ADVENTURES IN THE WILDS OF PARAGUAY—A NIGHT IN A COUNTRY HOTEL—PARAGUAY'S ONLY RAILROAD, AND ITS STRANGE PASSENGERS—WOMEN WHO PEDDLE RAW MEAT AT THE STATIONS—COUNTRY SCENES—TENS OF THOUSANDS OF ANT-HILLS—A LAND WHERE ORANGES GROW WILD—ODD FEATURES OF LIFE OUTSIDE THE CITIES.

HAVE you ever heard of Pirapo? It is a little town at the end of the railroad in southern Paraguay, 156 miles from Asuncion, and about 70 miles north of the Paraná river. Vast pastures surround it, for it is right out on the prairie, so that droves of cattle wander through it and graze in its streets. Pirapo has, altogether, not more than 50 inhabitants. It consists of a-half dozen mud huts, roofed with gray thatch, a frame railroad depot about 15 feet square, and a hotel with walls of mud and poles and a roof of corrugated iron.

I spent last night in the hotel, sleeping in a room with three other travellers, but, thank fortune! with a bed to myself. And such a bed; it was of a kind common in Paraguay, a canvas cot upon stretchers, with a pigmy pillow, so small that I feared it might get into my ear and so hard that it almost bored a hole in my head. My room-mates were a German cattle-buyer, a Paraguayan gaucho or cowboy, and Mr. William Harrison, the resident agent of the New York Life Insurance Company. The German coughed all night, the Paraguayan snored like a fog-horn, and Mr. Harrison at intervals cleared his throat and denounced the others for keeping him awake. It was indeed a restful time. And still it was a good hotel for Paraguay. The meals were cooked by a young Italian who looked like a butcher, and who shuffled about the table in his bare feet, his sleeves rolled up to his elbows. The meals were served in courses, and we had a table cloth and napkins. Our early breakfast was merely black coffee and dry bread, to which I added a couple of oranges. Dinner consisted of a

vegetable soup, boiled beef, stewed chicken and rice, a kidney *saute*, and a dessert of peanut candy. We had excellent bread, but no butter. Wine was furnished free with the dinner.

The landlord of the hotel was also a storekeeper, and his store will give you an idea of how things are sold in the backwoods of South America. The store-room was twenty feet square. It was walled with shelves filled with the goods most in demand by the Paraguayans. There were cottons from England, bottles of mustard, bitters, and liquors from France, and as many sardine boxes and canned meats as you will see in a mining store in the Rockies. There were sugar, rice, and bread, hats, shoes, and umbrellas. There was kerosene from the United States and a pair of scales made in Vermont. A large part of the business seemed to be in liquors. On the floor in the rear stood two barrels with dripping spigots: one contained a cheap Italian wine, which sells here for thirteen cents a quart; the other held *caña*, the native sugar brandy, which is so powerful that a full glass would intoxicate an American toper. It is sold for thirteen cents a quart, so that for about two cents enough can be bought to make a man intoxicated.

Paraguay has but one railroad, the only one of its kind in the world. It was built by an English syndicate under a subsidy from the government, and it is managed by the English to-day. Its cars go at such a pace that a dog tied to the rear of the train might keep up without trouble. The train waits long at the stations, and when it stops for meals it does not start until the last of the passengers has finished drinking his coffee. The prices of the tickets are low, differing according to class. The first-class cars are much like ours, in that there is an aisle running through the centre, with seats on each side; the seats are cushioned with wicker, and are not uncomfortable. The second-class cars are much the same; but the third-class have seats under the windows like those of a street car, with benches running back to back through the centre of the car.

In our train the third-class cars were filled with women and men, most of whom were smoking and chewing. There were more women than men, and more smokers among them. Some of the girls were very pretty, but almost all, from maids of sixteen to little tots of six, had cigars in their mouths. At every station I saw women smoking cigars, and women peddlers came

to the car windows and offered me bunches of cigars at the rate of a cent apiece. I noticed that most of the girls had fairly good teeth, which were often discoloured by the tobacco they were so disgustingly using.

At many of the stations the coming of the train was the event of the day. As the whistle blew there would be a rush to the depot. Crowds of women peddlers would take their places on the platforms, some with oranges, others with vegetables, and others still with beef. Think of selling raw meat at a railroad



SCENE ON THE PARAGUAYAN RAILWAY

station! At nearly every stopping-place butcher women appeared at the trains with great baskets of raw beef, which they peddled out in chunks to the passengers. Many of the meat peddlers had cigars in their mouths and they smoked as they sold; other women offered us laces, and a few had baby clothes and pieces of embroidery. There were also shoe-peddlers and peddlers of cakes and sweets.

During the journey we almost lived on oranges. The common fruit of this kind is as fine as any raised on the Indian River; the skin is so oily that if you squeeze it bubbles of oil will

stand out upon it, and if you touch a match to a bubble it will go off in a flash as though it were powder. Oranges grow wild in Paraguay. They are so plentiful that the people live upon them during the season, and it is not uncommon for a man to eat twenty-five in a day. They are exceedingly cheap; I have had ten offered me for a cent. At the station at Santa Clara, above Piparo, I offered a "medio," a native coin worth three-fourths of an American cent, to an orange peddler, saying in my poor Spanish:

"Quantos oranges por un medio, Senorita?"

"Ocho," replied the damsel, as she gripped her cigar between her ivory teeth, and held out both hands containing eight golden balls which would be worth at least forty cents in a New York market at the height of the orange season.

I am surprised at the beauties of interior Paraguay. The country is rolling and there is something new to be seen at almost every turn of the wheel. There are orange trees in the thickets and nearly every village of thatched huts has orange trees about it. There are palm trees on the plains; they grow in groves or in clumps rather than in forests. Some varieties are loaded with nuts, great bunches of little balls no larger round than a walnut, but of the same shape as the cocoanuts sold in our markets. These little cocoanuts are valuable, and the raising of them is one of the most profitable of the smaller industries of Paraguay. They are ground up and used for making palm oil and soap.

Large parts of Paraguay are natural pastures, with here and there clumps of woods or forests scattered through them. It is only the hills that are covered with trees. The plains have a rich growth of grass. Nearly all the land along the railroad is taken up; it is held in large tracts, many of the farms being fenced with barbed wire. It is curious to notice the different kinds of pasture. Some fields are covered with grass, which is coarse, gray, and dead, while adjoining them are meadows as green as Kansas in June. The green fields are those that have been burnt over to improve the pasture. As soon as the dead grass is burnt off, the green sprouts come up; the burning is done by many farmers once a year. The grass is better in the south; about Pirapo it is as high as your waist, and the cattle literally stand in it up to their bellies.

The cattle of the region are of a mongrel breed. They are somewhat like the long-horned stock which we had in Texas a generation ago, and which, until within a few years, was common in Argentina. Now the Argentines have fine stock, and this will eventually be the case with the Paraguayans. Most of the stock feed out in the open without visible care; I have seen no herding, although on some of the farms the gauchos were rounding up and branding the cattle. At such times the animals are thrown to the ground and the brands put on with red-hot irons. On getting again to their feet, the cattle are wild and revengeful, and frequently attack the cowboys if they can catch them dismounted.

One of the oddest things in Paraguay is the ant; it is the only thing that turns the country upside down. You see evidences of its work everywhere. Many of the fields are covered with thousands of ant-hills: some hills are as big as a haystack and a yard in diameter; others are not as large as a sugar loaf. They are red or brown, according to the soil of which they are made. These hills dot the landscape here as the burial-mounds do China. They are found in the cultivated lands and in the pasture fields, where you see long-horned cattle eating the grass among them. Sometimes they are only a few feet apart and sometimes fifteen or twenty feet: each of these hills is an ant village; it is an ant catacomb populated by thousands. There are as many ant works below the surface as there are above it. When a field is to be cultivated the first work is to get rid of the ants: the way to do this is to dig out the ant-hills and burn them; then only can the field be ploughed. The ants even burrow into the houses, then they make their way up through the brick floors and build sand-hills upon them, so that a woman may go to bed with a house as clean as a Dutch kitchen and awake the next morning to find her floors covered with great cones of sand in which are thousands of ants.

The average country house, however, has no floor but the earth. Nine-tenths of the houses outside of the cities are huts of poles, which are woven together and tied with withes or strings. They have roofs of thatch which extend out at one side, forming an open shed or room. Often the shed is larger than the closed part, for the latter is little more than the sleeping-place for the family. Many such houses have orange trees about them and



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BRANDING CATTLE, ARGENTINA

palm trees waving over them. As you pass them you see that some have red walls and some walls of brown or white. At first you think the red ones are painted, but soon see that it is the soil with which they are chinked that is red. This is the colour of the best land of Paraguay. The contrast of this rich red and the soft velvet gray of the thatch is harmonious; the houses are thus exceedingly picturesque. In this respect they are much like the country houses of Japan. The larger farmhouses sometimes have two rooms, with a thatched roof connecting them, and an open space in the centre.

The Paraguayans are hospitable. You can call at any hut in the country and will be made perfectly at home. You will probably see a lot of naked babies and some naked children who are considerably older than babies, for in the back districts boys and girls up to the age of fourteen often go about naked. If you can speak the Guarani language,—the Indian tongue which is in common use among the lower classes,—you will find the people quite intelligent, though exceedingly simple and ignorant of the world. You will be given a cigar to smoke, and doubtless will be asked to take



TOBA CHIEF, PARAGUAY

part in the puchero, or boiled beef and vegetables, which constitutes the usual meal. Your food will be cooked out of doors,

and the women may have to pound the corn to powder in a wooden mortar before it is ready for cooking. When you first enter the hut, you will probably be offered a glass of brandy or caña, for everyone drinks and every village has its brandy distillery. Indeed, it is estimated that every man, woman, and child in Paraguay could drink two gallons of caña a year and not exhaust the supply.

In a visit of this kind you will learn that the people are contented with their lot. They are philosophers, who regard foreigners as fools, because they wear out their lives working for money.

Our first stop on the way to Pirapo was at Villa Rica, the second city of Paraguay. It lies about 100 miles east of Asuncion, at the foot of a low blue mountain range which crosses Paraguay. It has about 6,000 population and is considered the most cultured town in the country. Its better classes live in large one-story buildings, roofed with red tiles, which form comfortable homes. One of the most interesting sights is the market, where are hundreds of sheeted women buying and selling. There are scores of girls going to and fro with burdens upon their heads, not a few of whom are water-carriers bringing in water from the springs in the rear of the town. The vessels used for this purpose are of all sorts, from gourds to oil-cans.




GRAND FALLS OF THE YGUAZU

CHAPTER XLVII

IN THE WILDS OF BRAZIL

THE TRIP UP THE PARAGUAY INTO THE PROVINCE OF MATTO GROSSO—A LOOK AT CUYABA—A STOP AT CORUMBA—TIGERS AND ALLIGATORS—SAVAGE INDIANS WHO ARE BORN WITHOUT HAIR AND GROW HAIR ONLY ON THE HEAD—SOMETHING ABOUT THE CHACO AND ITS CURIOUS TRIBES—THE TOBAS, LENGUAS, AND OTHERS.

HE wonders of the Paraná river system grow upon me. I am now on the Paraguay, which flows 2,000 miles from its source in Brazil before it loses itself in the Paraná. The Paraguay has a network of tributaries, on which you can sail for thousands of miles, and on some of which you can go in canoes so close to the tributaries of the Amazon that by carrying your boat a short distance you could reach the Atlantic through that mighty stream. The Paraná proper, which I left at the town of Corrientes, about 300 miles south, extends from that point more than 1,000 miles farther north, bounding South Paraguay and running on into Brazil. It is navigable for small steamers during a part of its course, but it has 400 miles of rocky rapids and falls which in the future may be classed among the picturesque sights of the world. The waterfalls are said to surpass Niagara. They are on the borders of Paraguay and Brazil, and are known as the Salto Guayra. They are, I am told, far grander than the falls of Yguazu, sometimes called the Niagara Falls of South America.

I have already shown that I sailed in coming to Asuncion on large river steamers as far as from New York to Omaha. I can go just as much farther by steam into the heart of the southern continent, or farther than from Philadelphia to Salt Lake City. The limit of steam navigation is now Cuyaba, Brazil, the capital of the State of Matto Grosso, and the metropolis of a vast country of undeveloped resources.

The first man to penetrate this region by steam was an American, Captain Thomas J. Page; he was commander of the steam

launch *Alpha* of the United States Navy, and on this little ship, in 1859, he pushed his way inland 2,700 miles from the Atlantic. To-day Brazilian mail steamers go over the same route twice a month, the steamers leaving here fortnightly for Cuyaba. The Paraguay river for half the journey is everywhere twenty feet deep, while its average depth is said to be forty-five feet.

The trip from Asuncion to Cuyaba is most picturesque. Crossing the boundary of Paraguay, you enter the great province of Matto Grosso, which is an empire in itself. As you go north the Paraguay river narrows, the scenery becomes wild, and you steam in and out among mountains, at the bases of which grow fern trees and giant palms. The banks are covered with a wooded mass of vegetation. The trees are tall and bound together with vines and creepers. You could not make your way through them without an axe or a knife.

There are all kinds of wild birds, and you get many shots from the steamer. There are alligators everywhere, and if you rise early you may now and then see tigers swimming across the river. Farther north, if you throw a dynamite cartridge into the water, the dead fish will soon float up on all sides of you, and within a few minutes you can pick up enough to half fill your boat. Here and there you pass farmhouses cut out of the woods; at some of these the boat stops for fresh meat, taking the beeves on board and killing them there. There are frequent forests of palms scattered along the river.

About two days' ride above Asuncion, just over the Brazilian line, a forest-covered island, 1,300 feet high, springs up ahead of you and apparently bars your progress. As you approach it, you see that there is a channel at the west side wide enough for the boat to go through. This island is known as the Mountain Gate. The land about it is said to be so unhealthy that, as one of the authorities states, even the trees are pot-bellied and dropsical; some of the human beings in the neighbourhood certainly are.

As you proceed farther the animal life increases. Deer are frequently seen, and among them are some almost pure white. The birds are of gorgeous plumage, that of the toucans resplendent in the brightest reds and blues. The alligators become more numerous, and you are frequently approached by Indians who have tiger skins for sale. A good skin will bring from five



HUT OF CABADELLO, BRAZIL.

to ten dollars. In addition to this there is sometimes a bounty paid for such skins. There is a man on the river who has made quite a fortune by killing tigers; he is said to have killed 193, and has received in the neighbourhood of \$3,000 for them. He got \$10 apiece for the skins, and the cattle owners paid him a bounty of \$5 per tiger.

Other bird and animal life offered for sale are parrots and monkeys. The prices are low, and you can have them almost for the asking. You can also buy bows and arrows, Indian bas-



FAMILY OF URUGUAYANS

kets, and hammocks. The hammocks are expensive; some are made of the brilliant feathers of tropical birds and cost as high as \$200 apiece.

Matto Grosso is one of the largest provinces of Brazil. It is as large as one-sixth of the United States, not including our outlying possessions. It forms the southern central half of the country. The greater part of it has never been explored, and it is as wild to-day as it was when Sebastian Cabot made his way up the Paraguay river only a few years after America was discovered. It is a land of gold and diamonds, of vast pastures, of

impenetrable forests, of rubber and cacao, and, in fact, in its possibilities, is one of the richest lands in the world.

The territory is to be reached only by the Paraná and Paraguay river systems. It has no railroads connecting it with the rest of Brazil, and its people rely for their supplies upon the steamers of the Paraná system. Every bit of its imports is brought more than 2,700 miles by river boats, and its federal officials, who as a rule come from Rio Janeiro, must travel 1,000 miles farther to reach it.

Leaving Asuncion on the way to Matto Grosso, you first pass Villa Concepcion, the largest city of northern Paraguay. There is a white customhouse on the banks, and back of this is the town. Concepcion contains about 5,000 people. It is made up of stuccoed buildings and thatched huts. It is a business centre, exporting large quantities of "maté" or Paraguayan tea and hides. There are more Indians and negroes than in Asuncion, and you find that the Indians and negroes increase as you go north.

At Coimbra, Brazil, 1,810 miles from Buenos Aires, you see on the west bank of the Paraguay the first village of any size for a distance of 700 miles on that side of the river. So far, all the settlements have been on the east bank of the river, the country to the west being almost entirely wild. At Coimbra there is a Brazilian fort. Farther on you come to the little village of Albuquerque, with low wooded mountains behind it, and about 175 miles farther the steamer stops at Corumba.

You are now over 2,200 miles from the ocean, almost as far inland by water as Salt Lake City is from New York by rail. Corumba is the chief port of Matto Grosso, where is located the only customhouse of the province, and where the officers come on board and open your baggage. The steamer stops long enough to enable one to get a view of the city. It is situated in the woods, on a hill, commanding the country for miles. It has the usual Spanish buildings of stucco and tiles, with palm trees growing here and there in the gardens. It has a beautiful plaza, about which are some large stores. The merchants are thrifty, and they do a large business, most of which is managed by Frenchmen, Italians, and Strasburg Jews.

Goods are sent out from Corumba to different parts of the interior. There is a mule route to Bolivia, the nearest town



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IN THE WOODS NEAR BAHIA, BRAZIL

being San Jose de Chuquito, which is 280 miles away. The journey takes 14 days and is very expensive. Mules are costly; indeed, you cannot get a good one for less than \$100 in gold. You must lay in an ample supply of canned goods, for those who try to live off the country fare poorly. There are few horses; they are subject, it seems, to a peculiar disease, which affects their hind quarters, and their places have been largely taken by cows and bulls. Bullocks are used for carts and also for riding, riding-bullocks bringing good prices. The bullock is not a bad saddle animal. Its gait, it is true, is a shambling trot or pace; but after you become used to it, it is not at all unpleasant. The animals are directed by reins which are tied to their horns. They are often used to pack goods from one town to another, and, indeed, take the places that horses have taken in our country.

It is shortly after you leave Corumba that you pass out of the Paraguay river and enter the San Lorenzo. The San Lorenzo is not so big as the Paraguay. In the Paraguay, steamers draw as much as nine feet, while those to which you change at Corumba do not draw over five. It takes about twelve hours to reach the San Lorenzo river from Corumba, and you sail a day and a-half on it before you enter the Cuyaba river, on which you steam to the city.

The boats here are always crowded, 200 passengers often being taken at one time. The whole journey from Corumba to Cuyaba requires six days, and the fare is \$7.00 in gold. It is one of the cheapest of steamship trips, for the price includes meals—coffee in the morning, breakfast at 10 A. M., and dinner in the evening.

The scenery of the San Lorenzo and Cuyaba rivers is very tropical. There are many palms; there are cotton trees which have balls of cotton upon them as big as oranges; others have blossoms of a silky fibre which hang down in great cones of white; this stuff is used by the people for making pillows.

Cuyaba has about 20,000 inhabitants. It is a surprisingly good city for its location and very much up-to-date. It has water-works, a street car line, and a cathedral. In its college French, English, and Portuguese are taught, and in its orphan asylum there are 200 boys. The town was founded in 1722, being laid out in Portuguese style with a very pretty plaza and park.

It is situated about two miles from the river, and you can ride to it on one of the tame cows or you may go on a street-car drawn by mules.

In going to Matto Grosso you skirt one of the least-known parts of South America. This is the vast region known as the Chaco, which lies west of the Paraguay river and south of Bolivia. The northern part of it belongs to Paraguay, and the remainder to the Argentine Republic. The part belonging to the Argentine lies south of the Pilcomayo river, and comprises a ter-



CUYABA, BRAZIL

ritory larger than California and Massachusetts combined, — enough, in fact, to make three States as big as Ohio.

The only settlements in this vast region are upon the Paraguay river. They consist of an occasional "estancia" or farm, and a few scattered villages. The chief town in the Paraguayan Chaco is Villa Hayes, which is in sight from Asuncion and has now about 91 families of foreigners. They are chiefly Swiss, French, and Italians, who are engaged in raising sugar cane and sweet potatoes, and in manufacturing brandy.

There are two large rivers which run through the Chaco. The Pilcomayo winds about like a corkscrew from the Bolivian Andes



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A VIEW IN THE CHACO, ARGENTINA

to the Paraguay river. It has many rapids, and can never be navigable. The Vermejo or the Vermilion river, enters the Paraguay farther south; it is at just about the bottom of the country. Its waters are so red that they discolour those of the Paraguay for some miles. The Vermejo is about 1,200 miles long, but it is navigable only for a short distance.

Just what the Chaco contains in the way of resources has yet to be discovered. I have met men who have travelled over parts of it and they tell me that the forests have much fine timber, and that there are good pastures scattered among the woods. The land will hardly be developed before railroads are built, and to-day there are not, I venture to say, 50,000 white people in the whole territory.

The inhabitants of the Chaco are almost altogether Indians. There are said to be more than 100,000 of them. They are among the most curious Indians in the world, some of the tribes being practically unknown to our ethnologists. There are Indians in the Chaco, for instance, who go naked from one year's end to the other, and some are so opposed to any covering that they will not even allow their hair to grow. They pull out every hair on their bodies except those on the head. Their faces, arms, bosoms, and legs are kept as hairless as when they were born. I have heard it stated that the people of one tribe are naturally hairless. It is said that they are born so, and that the hair never grows except on their heads. This has often been reported, but until I see an Indian grown to order to test the matter I shall continue to doubt the statement.

Some of these Indians are quite handsome. Take the Tobas, for example, whom I saw on my travels on the Paraguay river. They are as fine looking as any of the Indians of North America, and are as straight and as proud in their bearing as the bravest chiefs of the West. They have high cheek bones, copper-coloured skins, and straight black hair.

The Tobas commonly wear no clothes save when they come into the presence of white people, or cross over to Paraguay to trade. At such times the women wear white sheets draped about their bodies; at home they wear nothing except a blanket about the waist, that is, when they are in full dress. The men are satisfied with a band tied about the head.

The younger women among the Chaco Indians are fine looking, and the young braves are the noblest of their race. Both sexes age early, and after thirty the women look old. In most of the tribes polygamy is common, but I am told the women get along peaceably, and that a young wife is always welcomed into the family because the women do all the work, and the more women the less work. It is the woman who plants the crops, cooks the meals, makes the fishing nets, and weaves the blankets.

The men devote themselves to hunting, fishing, and fighting. They are skilled in the use of the bow, and are, it is said, brave in battle. They do not scalp, but cut off the heads of their dead and cure them in such a way that they can use the skulls for drinking-cups. They usually kill the grown-up members of the tribes they conquer, but save the children to become braves and wives.

The marriage customs of the Chaco Indians are strange. Giovanni Pelleschi, an Italian, from whose diary I got some of my information, says that when one of the Tobas wants to marry he paints his cheeks, his lips, and the hollows of his eyes red. He then struts about the tent of his sweetheart, and later on brings all the sheep, chickens, skins, and other property he possesses to the young lady and offers them to her as a present. If she accept them the marriage is on, and he can come in and live with her family, shortly afterward removing to a hut of his own. If she refuse, he goes elsewhere. I am told that such marriages are happy, that the women are faithful, and that they make good mothers.

These Indians are not very intelligent. They cannot count more than four. They have no money, and their trading is altogether by barter. A community of interests seems to prevail, and if one of the women gets a piece of finery from a foreigner she has to divide it with her sisters, her cousins, and her aunts.

The wigwams of the Chaco are different from those of our savages. A village often has its huts built together, so that one thatch can cover a number of dwellings. One of the common houses looks much like a great hay waggon, several families living in the different apartments under it. One part of each hut is used for cooking and another for sleeping. The people sleep on skins when they have them, otherwise they pass the night on the

bare ground. The huts are so well made that they do not leak. They are built by the women, and when completed one of the braves crawls on the roof and stamps about to see if he can make the thatch break through. If he cannot the hut is all right, but if the roof give, he tells his wife to go to work and make it over again.

The Indian women are said to be good cooks. They use pots and spits for cooking, and I am told they always wash their pots after using them. They use shells or gourds for spoons, but forks are unknown, and the person is considered happy who owns a knife.

S. A.—29

CHAPTER XLVIII

IN THE LITTLE LAND OF URUGUAY

A BIRD'S-EYE VIEW OF THE SMALLEST OF THE SOUTH AMERICAN REPUBLICS—
THE RICHEST LAND SOUTH OF THE EQUATOR—A LOOK AT MONTEVIDEO
AND ITS BEAUTIFUL HARBOUR—ITS PUBLIC BUILDINGS, ITS THEATRES,
BANKS, AND STOCK-EXCHANGE—HOW URUGUAY IS GOVERNED—ITS
POST OFFICES, TELEPHONES, TELEGRAPHS, AND SCHOOLS—STRANGE STREET
SCENES.



URUGUAY is the smallest and richest State south of the equator. It lies at the mouth of the Rio de la Plata, just across from the Argentine Republic, and at the south-east corner of Brazil. The whole country would hardly be a mouthful for Argentina, and not a good-sized bite for Brazil; but its soil is as fat as the valley of the Nile, and its people step high on the stilts of self-esteem. Most of the countries of South America are extensive. Brazil is as large as the whole of the United States without Alaska or our new islands. Argentina covers more territory than all of our country east of the Mississippi, but little Uruguay is only about as big as Missouri and Connecticut. It is about the size of North Dakota, though not so thickly populated as Nebraska. It has about as many people as Boston, and fully one-third of these are in the capital, Montevideo, which at present is considerably less populated than Cleveland, Ohio.

But first let me give the reader a bird's-eye view of the country. If you could look at Uruguay from a balloon you would see that it is gently rolling; it has no hills more than 2,000 feet high. The land is spread out in undulating waves, the greater part of which is made up of rich pasture. It is well-watered, for there are rivers and streams everywhere and but few swamps. The climate is such that the grass is green all the year round, and the cattle and sheep are fed by simply turning them out to provide for themselves. There is not a barn in the country. You may travel a thousand miles and not see a haystack or feeding-



CITY OF MONTEVIDEO, URUGUAY

trough. Still there are flocks and herds everywhere; at least, 5,000,000 cattle, 13,000,000 sheep, and several hundred thousand horses and mules are sustained without trouble. Talk about Job and his cattle on a thousand hills! In respect to both hills and cattle, Job was a pauper compared with the Uruguayans.

The land is well adapted to support a great population. It has now about twelve to the square mile, and probably not half of this number when you take out the cities; I doubt whether there is a family for every 640 acres. Still the soil will raise wheat. It grows apples and pears for the Buenos Aires market, and it has strawberries nine months in the year. It is in about the latitude of Florida, but is not as hot in summer, nor as cold in winter. Its seasons, of course, are just the opposite of ours; when we have fall, Uruguay has spring, and when we put on our sealskins the Uruguayan ladies are using their fans. August is the coldest month, and along about January the weather is warmest.

I spoke of the land being well-watered. The streams cover it like the veins of a leaf. The veins of the human body are not more in number than the waterways of Uruguay, and around almost the whole of the Republic there is a belt of water, making it, indeed, a peninsula. It has, in fact, about 700 miles of navigable waterways; there is the Atlantic on the south and southeast; there is the muddy river Plate with 155 miles of coast line; and a little farther over and along the western boundary are 270 miles of the swift-flowing Uruguay. The latter is about 9 miles wide at its mouth, and during most of the year, steamboats of 14 feet draught can go up it to Pysandu, a city near the middle of the western boundary. From this point you get smaller streams, which carry you farther up, and the Rio Negro, which crawls across the country dividing it in two equal parts, is also to some extent navigable.

Uruguay has few large cities. It is like Argentina in that its capital rules it and forms its social, intellectual, financial, and industrial centre. There are perhaps four cities which range between 10,000 and 15,000 in population, and a dozen smaller towns of from 3,000 to 6,000 each. These are market towns and state capitals, but they all pay tribute to Montevideo.

Montevideo calls itself the Paris of South America. It is the healthiest city in the world and the cleanest city on the continent. Built upon a tongue of rock which runs out into the

muddy Rio de la Plata, the streets all drain into the river, and every rain gives the city a washing. There is water on all sides of you; if you walk up or down a hill you come to the sea, and the slope is such that there are no stagnant pools.

Monte-video means "I see the mountain." If you look at the root of this tongue of rock you will really see the mountain, from which the city is named. It is called "The Cerro"; but so far from being a mountain, it is not quite as high as the Washington Monument. At night you may distinguish twenty-five miles out at sea the revolving light upon its tower, but even if this were unlighted you could tell that the Cerro was there. How? Why, by its smell. There is a great slaughter-house on the Cerro in which 200,000 cattle are killed every year, and from which, during a land breeze, a disgusting odour is wafted over the waters. Long before I could see the city, I knew by this smell that I was approaching Montevideo.

The bay of Montevideo is naturally one of the finest in the world. It is in the shape of a horseshoe, six miles in circumference, and so large that many hundred ocean steamers could be in it at a time. Hundreds of steamers formerly cast anchor here. This is not the case now, although more than a thousand ships call at the port annually. The waters of the Rio de la Plata for the past seventy years have been dropping mud into the bay. They have been filling it up at the rate of an inch a year, and now no ship that draws more than fifteen feet can come in. The result is that the ocean steamers must anchor far out in the river and all goods have to be brought in upon lighters. We were carried to the city on a steam-tug, our ship remaining several miles from land.

For years Montevideo has been planning to dredge this bay. It is estimated that it will cost \$30,000,000 to clean out the mud, but the result would be worth much more than that to the city. It might make it the chief port of the river Plate, as it is already the chief port of the country. There are now daily steamers from Montevideo to Buenos Aires, and every day or so you can get a ship for Europe. There are also steamers to and from the ports of Brazil, and river boats which will take you thousands of miles up the Paraná, Paraguay, and Uruguay. I travelled more than 1,200 miles on river steamers in coming down from Asuncion to Montevideo.

I find Montevideo better built than most other South American cities. About one-fifth of the houses are of three stories. They are of a stone quarried near by and are in architecture more like the buildings of Europe than those of South America. Many of the houses are covered with stucco, painted in bright colours. Some are quite large. The Solis Theatre, for instance, covers almost two acres, and will seat 3,000 spectators. It was built more than 40 years ago and cost \$300,000 at that time. Sarah Bernhardt has played in it, and Patti has also been listened to within its walls.



THE THEATRE SOLIS, MONTEVIDEO

Another fine building is the "bolsa," or stock-exchange, situated at the corner of Zavala and Piedras streets. This was built in 1863 and cost just about half as much as the opera house. It is the stock-gambling place of Uruguay, and, like the stock-exchange of Buenos Aires, has seen some notable crazes. Uruguay went mad about the year 1890, as did Argentina: it had one bank with a capital of \$12,000,000, whose stock after its failure, some years ago, dropped to 80 per cent below par. At present there are a number of good banks, some of the largest being branches of the foreign banks doing business at Buenos

Aires. Money brings good rates of interest, and, as far as I can learn, all of the banks pay dividends.

Referring to money matters in Uruguay, I may say that this is the only South American country I have visited which is on a gold basis. In Peru, Chile, Bolivia, and the Argentine, I got about \$3 for \$1 in negotiating my drafts on London; while in Paraguay, when I made a draft for \$100 in gold I usually received about \$700 in Paraguayan money. This was very pleasing, for although the money had not a purchasing value equal to its face value, it went a great deal farther than the same amount reduced to gold. In Montevideo an American dollar is worth only 96 cents and for an English pound you get but \$4.72.

Cab fares here cost 50 cents a trip or \$1 per hour. In Buenos Aires I paid the same price in Argentine money, or less than 33 cents Uruguayan; the result is that everything is dear and money does not go half so far. At the hotel in Montevideo I pay \$3 per day, which is almost a gold dollar more than I paid at Buenos Aires, where the rate was \$8 in Argentine money. A bottle of St. Julien, which I had the other day, cost me \$4, and everything else is proportionately high.

There is now talk of establishing a bank with a capital of \$10,000,000, which shall be under the control of the government, and shall have the right to issue bank notes to half the value of the capital subscribed. This bank will be called the Bank of the Republic. It can pay its notes in gold or silver, at its own discretion, and the president and directors are to be appointed by the government. The scheme, if carried out, will in all probability reduce Uruguay to a silver basis, for such financial institutions under a South American government cannot be trusted. The officers in power to-day may be all right, but those who come in by the revolution of to-morrow are more than likely to be all wrong. Such a national bank would always be at the mercy of the President of Uruguay, and there is no telling when an Executive may arise who will not embezzle the funds. Borda, the last President, had nothing when he was elected; when he was assassinated his estate was worth \$3,000,000, and his widow to-day has villas, farms, and gold galore. Another President, I am told, stole about \$5,000,000 from a former national bank during his administration. He had the appointment of the directors, and would send down for \$50,000 at a time, for his personal use. As

a result of such extravagance and corruption, running through a series of years, Uruguay has now an enormous national debt. Its foreign debt amounts to more than \$128,000,000, and it is paying annually in interest alone about \$4,000,000. The debt, if divided up, would require the payment of \$140 by every man, woman, and child in the country, or of about \$700 per family. The debt, in fact, is almost half the estimated value of the real estate of the Republic, which in round numbers, in 1895, was \$275,000,000, of which almost half is located in the department of Montevideo.



CATHEDRAL AND PLAZA, MONTEVIDEO

And still the Uruguayan capital rather prides itself upon its thrift and piety. It has a cathedral, churches, convents, and hospitals. The cathedral is now about a hundred years old, and is as solid as when it was built. The Church of the Immaculate Conception was constructed by the milkmen and market-gardeners; and there are forty charitable institutions, with 12,000 members, that spend \$250,000 a year on behalf of the poor and sick. There is a foundling asylum that provides for 280 babies annually; the institution, I am told, buries more than half of them before they get into short clothes. The percentage of

illegitimacy is large, fully one-fourth of the children of the country not being "wise enough to know their own fathers." This, I am told, is in large measure due to the costly marriage fees.

The state religion is that of the Roman Catholic Church, the Protestants being but a drop in the bucket of Uruguayan life. In the Department of Montevideo alone there are 179,000 Catholics to about 11,000 Protestants, and 23,000 others who are of no declared religion. I understand that Protestants are well treated and that in the cities religious intolerance is unknown.

Montevideo is noted for its culture. It is a city of newspapers, libraries, and schools. It has a national library, which contains 22,000 volumes. It has a national museum, in which there are 33,000 objects, and it has its daily, weekly, and monthly periodicals. It is the centre of intelligence for the country, and the leading dailies, weeklies, and monthlies are published here. Most of the dailies are in Spanish, but there are two in English, one in Italian, and one in French.

As to the school system, this is steadily improving. There are 500 more schools in Uruguay now than there were in 1876, although as yet only 9 per cent of the population attend them, and the majority of the common people cannot read or write. There are now close upon 1,000 institutions of learning, public and private. There are about 2,000 school-teachers, of whom more than two-thirds are women. Teachers are well paid, the average amount paid them being about \$35 per month. Most of the teachers are foreigners, there being only 606 native teachers of the 2,000 in the service. Normal schools have, however, been established, and there will be an increased number of native teachers in the future. Montevideo has a university with 85 professors and 549 students. The course in this institution is very complete, law, medicine, engineering, and the ordinary college studies being taught. It is controlled by the government, which also supports an industrial school, having 243 pupils, and a military college, which has 48 students in attendance.

The country has good postal and telegraph systems. It has more than 4,000 miles of telegraph lines and nearly 350,000 telegrams are annually sent. There are 636 post offices, and last year the post office handled in the neighbourhood of 10,000,000 letters and about 26,000,000 newspapers and packages.

But let us go through the city and look at the people. We make the wharf our starting-point and walk over the cobblestones up the hills in the shadow of three-story buildings. We stop on the corner to get our boots blackened and are charged the regulation five cents a shine. Newsboys accost us with the daily papers, just as they do in New York, and well-dressed women and men pass by.

There are many curious sights. Men go by us with loads on their heads or on their backs. Here comes a milk-peddler; he is of the same style as those of the smaller cities of the Argentine Republic. He sits on his horse with his legs about its neck and almost on the top of the leather buckets that contain his milk cans. Each one is corked with a round piece of wood wrapped in a dirty rag, and I doubt whether he changes the rag from one year's end to the other. There he has stopped and has gone into the house. His horse stands still, although there is no hitching-post or iron ring in sight. He has hobbled the front feet of the animal with the whip. These men supply the city of more than 250,000 inhabitants with milk. They used to supply it with butter, which they made by galloping their horses so that the jolting did the churning. Then, I am told, when you wanted butter the man dipped his hands into one of the cans and squeezed up a chunk. It is still the same outside the cities; little butter is used by the common people, and there are farmers with thousands of cows who eat their bread dry.

Listen to the horns! We hear them every few moments as we pass along the street, and wonder whether it is the Uruguayan Fourth of July, or Christmas, or New Year, and whether or not the boys are out for a holiday. We soon see that the horns are blown by street-car drivers, who thus notify all to keep out of the way. They sound their horns at every street corner and now and then give a toot between times. The cars are drawn by horses, and so far electricity as a motive power has not appeared. There are electric lights, however, and at public celebrations the whole city is ablaze with incandescent globes of all colours.


There are few cabs. The many hills and the cobblestone roads retard their use, and the people rely upon the cars as their chief mode of transit. The draying and heavy hauling of Montevideo is done in carts, to which two or three mules are har-

nessed, one on the inside, and the others on the outside of the shafts. The driver usually rides one of the outside mules. The carts have wheels from six to eight feet high, with hubs as big round as scrubbing buckets and shafts the size of telegraph poles. As we go farther we see that nearly all vehicles are two-wheeled. We ask why, and learn that taxes on such things are paid by the wheel, and that a two-wheeled vehicle pays only half as much as one with four wheels.

CHAPTER XLIX

THE PRESIDENT OF URUGUAY

HE LIVES UPON A POLITICAL VOLCANO AND IS ALWAYS IN DANGER OF ASSASSINATION—A LAND OF REVOLUTIONS—AN EVENING AT THE "WHITE HOUSE" OF MONTEVIDEO GUARDED BY GATLING GUNS ON THE ROOF—HIGH LIFE IN THE URUGUAYAN CAPITAL—QUEER CUSTOMS OF COURTSHIP AND MARRIAGE—HOW YOUNG MEN PLAY THE DRAGON, AND WHY THERE ARE NO BREACH-OF-PROMISE SUITS.

HILE in Montevideo I spent an evening at the President's mansion. The occasion was one of his weekly receptions, and the wealth, culture, and beauty of the capital were present. I might add the courage, for the reception was held under curious conditions. There were soldiers at the door who scrutinized every guest as he passed in. I felt their eyes bore through me when I entered with our consul-general and his family. Gatling guns, cannon, and dynamite bombs looked down upon us from the roof, and I doubt not private detectives were stationed here and there along the streets.

The President of Uruguay—Juan L. Cuestas—lives upon a political volcano. He is in daily danger of assassination, and he never knows when a revolution may spring up to overthrow him. He is one of the most remarkable men in South American politics; he was vice-president at the time of the assassination of Señor Idiarte Borda, and thereby became president. He is still in office, and has made himself dictator of the Republic.

At one time a revolution sprung up to overthrow him. The army had its headquarters not far from Montevideo, and many of the chief officers were in the conspiracy. If they could have trusted each other, Cuestas would have been killed. The revolution failed because the man who was to have cut the telephone wires between the station and the city did not do his duty. The result was that the President was notified as soon as the army set out for Montevideo. The officers, finding that they were discovered, suspected each other of treachery; some began to back

out, withdrawing their troops, and the police were able to control the remainder.

For such reasons, President Cuestas never moves about without an armed guard. His residence is in the street of the



JUAN L. CUESTAS, PRESIDENT OF URUGUAY

Eighteenth of July, at quite a distance from the administration buildings. When he goes from his house to his office he has soldiers about him, and there are ten outriders on white horses in front and behind his carriage. No one is permitted to enter



the presidential mansion at any time without the permission of the soldiers, and half-way up the marble staircase there is a military aide, who carefully scrutinizes all who go by.

Passing this official we proceeded to the second floor, and were soon in the President's parlours. They are very large, and are as well furnished as those of the White House at Washington. At the time we entered they were filled with ladies and gentlemen, who were laughing and gossiping about subjects of passing interest, and as unconcerned as though they were at a church social, and not sandwiched, as it were, between Gatling guns and military guards in the midst of possible revolution. The ladies wore low necks and short sleeves and the gentlemen were in evening dress.

When we came in, the wife, daughter, and sons of the President were entertaining the guests, His Excellency, the President, having not yet entered. Shortly after shaking hands with us, Madame Cuestas led us to one end of the room, where there was a large sofa with chairs facing each other and running out into the room at right angles to its two ends. She and her daughter sat on the sofa, and the distinguished guests and ourselves occupied the chairs. This is the way a Montevideon hostess receives her callers; it is the form of seating in the better-class houses all over South America. We chatted some time with the President's wife, while callers came and went, shaking hands with everyone in the room as they entered, and with Madame Cuestas and all of the guests upon retiring.

The Orientales, for that is what the Uruguayans call themselves, are noted for their beautiful, cultured, and fashionably dressed women. They vie with the Porteños, or Buenos Aires women, as to beauty, and consider themselves much more aristocratic and high-born. They call Montevideo the Paris and the Madrid of South America. It must be confessed that they have some reason for the claim. The city has magnificent homes, as well as a great many wealthy inhabitants. It has its fashionable "four hundred," who are as well-dressed and as well-bred people as you will find anywhere.

They have fine houses and well-padded pocket-books. Many of them trace their descent from families that came to Uruguay hundreds of years ago. Their possessions are in great estates, rented houses, and in cattle and sheep. They have their palaces in Mon-

tevideo, whose floors are marble, and whose ceilings are frescoed and upheld by marble columns from Italy. They have vast one-story buildings on their estates, where in summer time they entertain like lords, supplying every guest with a horse. In the winter, their surroundings are equally pretentious, but very uncomfortable, for the houses of Montevideo are as frigid as the white marble in which they are finished. The people believe artificial heat unhealthy, and in this city, which is as large as Washington, and quite as cold, there is not a furnace or a steam-heating plant. During cold snaps, a hostess often receives dressed in furs, with her hands in a muff and her feet on a hot-water bottle, and gentlemen and ladies come to state dinners in overcoats and fur capes.

Rich families have hosts of servants; they have their coachmen and footmen, **their** housemaids, ladies' maids, and serving women. Men cooks are often employed; in such cases it is customary to give the cook a certain amount per day, and allow him to do the marketing and take his wages out of the daily allowance. Even where he is given the money for marketing only, it is expected that he will steal a little every day. The wages of servants are high; cooks receive from \$14 to \$25 per month, or about as much as they do in Washington, while housemaids are paid from \$10 to \$18 per month—the amounts being in gold.

Uruguayan families are large. When a young man is married he brings his better-half to live with the old folks, and often half-a-dozen families will reside in one house. As a rule, the girl goes to the husband's family.

It would surprise many Americans who look upon society south of the equator as half-savage to know that there are many Montevideon women who wear evening and visiting dresses that cost \$100 dollars apiece, and that a few of the "upper ten" have single dresses in their wardrobes for which they have paid from \$500 to \$1,000 in gold. Their best dresses come from Paris, and they have the latest styles as soon as New York. They are fond of diamonds, the use of jewels being more common in Montevideo than in either New York or Washington. Take, for example, the case of a recent dinner here: one of the best-dressed women present was the wife of the vice consul-general of the United States, an Orientale of one of the first families. At this dinner she wore a gown of brocaded white satin, trimmed with



AVENUE OF EUCALYPTUS TREES, MONTEVIDEO

a wide drapery of point lace, which festooned the whole skirt and its long train. Her corsage was trimmed with a row of diamond butterflies, some of which were quite large, and these diamonds ran from shoulder to shoulder. At the dinner there were other costumes equally costly, the most common of the ornaments being aigret plumes, fastened to the hair with elaborate diamond pins.

Uruguayan women are of the Spanish type, tall and well-formed. The scrawny girls are few, and the average maiden is large-boned, well-rounded, and plump. As the women grow older they run to adipose tissue, and not a few of the elderly dames are fat. The type is uniform; the eyes of most of the women are dark, but full of lustre, and their complexions are clear, dark, and rosy. Both young men and young women look clean and healthy, and show great animation of face and manner. The men are as careful of their dress as are the women, and those of the upper classes are very particular as to what they wear on every occasion.

There are few cities where etiquette is of more account than in the South American capitals. There is in Montevideo an etiquette of the pavement. The Orientale thinks no one but a boor would allow a lady to walk on the outer edge of the pavement in going along the street; the inside is the place of honour, and the lady must always have it. If two ladies go together, the younger lady always takes the outside. If two gentlemen walk together, each vies with the other in trying to make him take the inside. A host must always give his guest the inside, and the man of lower rank gives the man of higher rank with whom he is walking the inner honourable path.

Girls do not appear on the streets without chaperones. If a young woman go out for a walk or to shop, she cannot do so unless her mother, or her aunt, or servant maid is with her. She may take a nurse girl of thirteen or fourteen, not because she is of any earthly good to guard her, but as a badge of respectability as a chaperone. Women never make the first bow to the men they meet on the street; the man must take off his hat, or the woman cannot notice him, and if he does not do this it will be considered a slight by the woman. Young unmarried men and women cannot walk along the street together, chaperone or no chaperone, and a young woman and young man who should go out for a moonlight drive would not only lose their

reputations, but would be socially ostracised. Young men who have sisters never ask their young men friends to come to their houses, and as for a young man spending an evening alone with his lady-love—such a thing is unheard of.

Even among themselves young women have no such intercourse as in the United States. There are no musical clubs,



MONTEVIDEON BEAUTY

Shakespeare clubs, or women's missionary societies. A young man has no chance to learn the character of a woman before he proposes for her hand. Even his sisters can know little about her; his only possible avenue of information is through the servants. From these, if he care to stoop so low, he may possibly learn something as to the young lady's disposition and habits—whether she is or is not “a big-eater” and what it takes to keep



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PRIVATE GARDENS, MONTEVIDEO, URUGUAY

her. His only chance of seeing the girl will be at the regular receptions of the family during the season. These are held weekly, and at them both gentlemen and ladies are at home. The usual hours for such functions are from 4 to 7 in the afternoon and from 9 to 12 at night. During the afternoon-calling wine and tea are served; and in the evening, at 11 o'clock, the guests are invited to the dining-room for refreshments. Evening dances and parties usually last so long that the more devout are able to attend morning masses on their way home. Dinners are elaborate, a different wine being usually served with each course, and champagne with dessert; coffee and liquors are taken in the parlours after dinner.

Among the singular customs of the country are those of courtship and marriage. The girls are carefully watched, and there is no indiscriminate love-making without the chaperonage of the parents or members of the family. Young ladies would be compromised if they had gentlemen callers; indeed, a man never thinks of calling upon a young woman until he is engaged to her. If he admires her and wishes to know her, he begins his advances by "playing the dragon"; this means that he dresses himself in his best clothes and struts up and down before her house, while she looks at him from the balcony. Every fashionable house in Montevideo has a balcony, and the chief amusement of the girls is to stand on this or lean out of the windows looking at the people as they go by.

When the young man thus walks up and down gazing at her window, the young woman understands what it means and comes out and makes sheep's eyes in the same direction. The two will look at each other for hours without a word being spoken. Men may come and men may go, but still they gaze. As a rule, the passers-by do not notice the lovers; indeed, it is not always safe to do so. Your action may be misconstrued, the lover may become jealous, and a knife thrust under the fifth rib, most likely given in the dark, may follow.

After practising this dragon act for some time, the young man may go to the father of the girl and say that he would like to call upon his daughter with a view to proposing. If papa says all right, he calls, and a day or so later you will see an item in the paper stating that young Señor So-and-So is paying attentions to Señorita Thus-and-So, and that a marriage will probably soon take place.

When the young man calls upon his sweetheart, all of the family are in the room. He gets her as far off as he can, however, and devotes himself only to her. From this time on until after the marriage, he must pay attentions to no other woman. If he go to a dance or party, he must come early and wait for her, and he will spend the evening with her alone. At every party in Montevideo you see a number of these young lovers, who are called *novios*, waiting for their affianced, or *novias*. The girl pays attention to no one but her *novio*, while the boy has eyes alone for his *novia*. The two go off by themselves and devote the evening to mutual soft-spooning compliments.

I am told that such couples are clogs on the wheels of Montevideon society. It is a wonder that mothers, who are so careful at home, will let their girls do as they please when once they are engaged. If you ask a mother where her daughter is at such a reception, she will say that she is with her *novio*, and the subject is dismissed as a matter of course. I was chatting about this one day with one of the Montevideon society ladies, when I asked: "What do you do if the *novio* becomes disgusted and 'goes back' on the girl, refusing to marry her, or *vice versa*?" The reply was: "You seldom hear of such a case. A young man who would act in that way would be disgraced by society; as for the girls, their chief end in life is marriage, and they don't dare to miss the chance. The married state here is far ahead of single blessedness, for it is the married woman who rules society. After the wedding she can do as she pleases; when the priest performs the ceremony he strikes the chains of maidenhood from her ankles."


The weddings of the Orientales are held in the churches, with a supper and dance at the home after the ceremony. The wedding gifts are very elaborate, generally including diamonds and silver. The honeymoon is usually spent at home, the Orientales not believing in our custom of taking wedding-journeys. They call the period "La Luna de Miel," or the moon of honey, and, if possible, they try to enjoy it alone. If the wedding be in the summer and the family be at the time in the country, they will come to the town house and open it up for themselves, and if in the winter they may possibly go out to the "estancia." As to their permanent quarters, the groom's father usually makes a present of the house and all its furniture, often including table linen beautifully embroidered, and the wife's father does as well as he can in money and presents.



CHAPTER L

THE BABY REPUBLIC OF BRAZIL

THE PORTUGUESE HALF OF SOUTH AMERICA—AN ENORMOUS COUNTRY OF VAST RESOURCES—TRAVELS THROUGH WEST DEUTSCHLAND—THRIVING CITIES AND VAST PASTURES OWNED BY GERMANS—A VISIT TO THE DEATH HARBOUR OF SANTOS—HOW COFFEE IS LOADED FOR AMERICA—UP THE MOUNTAINS TO SÃO PAULO, THE GREAT COFFEE METROPOLIS.

 BRAZIL is the baby among the world's great republics, the biggest infant in the international animal show. It is less than ten years old as a republican government, and to what it will grow no one can tell. It has twenty-one States, some of which like São Paulo, where I now am, are growing so powerful that they may break off from the main body politic and become republics themselves. Each of the Brazilian States has its local politics and politicians. Its people are full of State pride, and the federal union has not the strength that it has in other South American countries.

Brazil is so vast and its sections are so far apart that without better railroad and telegraphic communications it will be impossible to manage it well from Rio de Janeiro. I have written something about Matto Grosso. That State is one-sixth the size of the United States. How long does the reader think it takes the federal officials to get to it from Rio de Janeiro? It requires more than a month by steamboat! The distance is 3,840 miles, for one must go round by Montevideo and up the Paraguay and other rivers to reach its capital, Cuyaba. It takes a month to go from Rio to Manáos, the capital of the chief province of the Amazon; and Pará, at the mouth of the Amazon, is almost as far away from Rio as it is from the United States.

Brazil is the Russia of the South American continent. It is as extensive as the United States, without Alaska and our outlying possessions, and ranks fifth among the great countries of the world. It is longer from north to south than from Pittsburg

to San Francisco, and wider from east to west than from New York to Salt Lake. It comprises about half of all the land of South America, and contains more than half its people.

We look upon South America as a Spanish continent. It would be just as proper to call it a Portuguese continent, for Brazil is Portuguese, and its 18,000,000 people speak the Portuguese tongue. The Brazilians are in many respects different from other South Americans; they have a character and customs of their own, and they are now, for the first time, managing their country for themselves, and that after republican methods.

The country is far different, physically, from what I supposed it to be. Many of us look upon it as a vast lowland forest, with here and there a coffee plantation or a rubber grove, and all around the ghost of yellow fever. The real Brazil is an empire with soil and productions equal in variety to the United States, and a climate in many parts as salubrious as that of any part of our country. Brazil is by no means all flat. The Amazon valley is a great lowland plain about as wide as from New York to Cleveland, and as long as from Philadelphia to Denver, sloping gently from the Andes to the Atlantic. It is covered with forests, but much of it is healthful, and on the Amazon itself the weather is cool for a considerable part of the year.

South of the Amazon valley are highlands, some sterile and others afflicted with terrible droughts. Just below the Amazon they are having a drought now, and the ships of the Brazilian government are carrying the starving people to the rubber camps where they can get work. Below the highlands are other great plains varying from 900 to 3,000 feet above the sea, and having a climate in which white men can live. On these plains there are rich farms, many parts of which need only a slight cultivation to make them produce abundantly.

The southern half of Brazil is the most healthful part of the country. There are regions there which are as healthful as any in the world. I am now half a mile above the sea, and this is the character of most of the land of this region. There are about 1,500,000 people in the State of São Paulo. The State of Minas Geraes, just above it, has 4,000,000 people, and just below is the well-settled State of Rio Grande do Sul.

Rio Grande do Sul is an agricultural province. It raises wheat and meat. It has vast pastures on which hundreds of

thousands of cattle are feeding. It has beef factories in which more than \$7,000,000 worth of jerked beef was made last year. At the town of Pelotas alone 300,000 oxen are annually slaughtered, and there are factories there making soap, candles, and manure out of the refuse.

Rio Grande do Sul has a number of cities, in which are street railroads, colleges, and daily newspapers. In the capital, Rio Grande, there are five daily papers; in Porto Alegre six, and in Pelotas four. There are good banks conducted by Englishmen, but nearly all other businesses are managed by Germans. There are German stores, cigar factories, and breweries. About one-sixth of all the inhabitants are Germans, and on this account the country has been called West Deutschland. Of late a large number of Italians and Portuguese have come in, but the manufacturing and nearly all the export trade is still in the hands of the Germans, and they own, it is said, about one-fourth of the property. In a quarrel between Brazil and the Kaiser, this State might easily break away and demand German protection.

The climate of Rio Grande do Sul is about that of Washington city. In January, midsummer, the thermometer goes up as high as 100°, and in the winter month of July the ground is often covered with snow. North of Rio Grande do Sul are the States of Santa Catharina and Paraná, both of which will some day be populated by Europeans. They are very similar to Rio Grande and have vast undeveloped areas.

Above these States lies São Paulo, one of the best provinces of Brazil, a region which furnishes nearly all the coffee consumed in the United States, and one of the richest countries in the world. Generally speaking, it occupies a high elevation, although there is a low strip of malarious land along the coast. Back of this is a range of mountains about 3,000 feet in altitude, and then a plateau, which slopes gently toward the west. The soil of the plateau is a rich red loam, producing all kinds of vegetables and fruits, and also coffee, corn, and grain. The lands along the coast are good for sugar; indeed, the first sugar in Brazil was raised near Santos. Of late, sugar-planting has been largely given up and the people are devoting themselves to raising coffee. Many of them have made fortunes, and, as a result, the capital city of São Paulo is now a town of rich men.

The Paulistas, as the people of São Paulo are called, have always been the best of the Brazilians. They were among the first settlers, showing their enterprise at the outset as kidnappers in stealing Indians and making them work. It is estimated that they captured 2,000,000 Indians in three centuries. Later on, they distinguished themselves in other ways. They have now the best railroads in Brazil, the most modern improvements, and the best government. The State obtains its revenue from an export tax,



SAO PAULO, BRAZIL

and, as the coffee exports run into many millions a year, it has a large revenue.

São Paulo is the largest city in southern Brazil, and one of the richest cities in South America. It is the coffee metropolis of the country, being connected by rail with the coffee-growing districts and also with the great coffee port of Santos, on the Atlantic. I came from Montevideo to Santos in a Royal Mail steamer and thence here on the railroad. I am housed in a good hotel and my surroundings are pleasant. São Paulo is one of the

best towns on the continent; it is wide-a-wake and has many good buildings and fine stores, showing that the people spend freely of their money.

Let us walk out on the streets. It is early morning and the children are just going to school; among them are some bright-faced little girls, without hats, and little boys with hats and bare legs; they are trudging along over the cobblestone streets, with their school-books on their backs. Here come the street cars! They are painted red and are drawn by mules. What



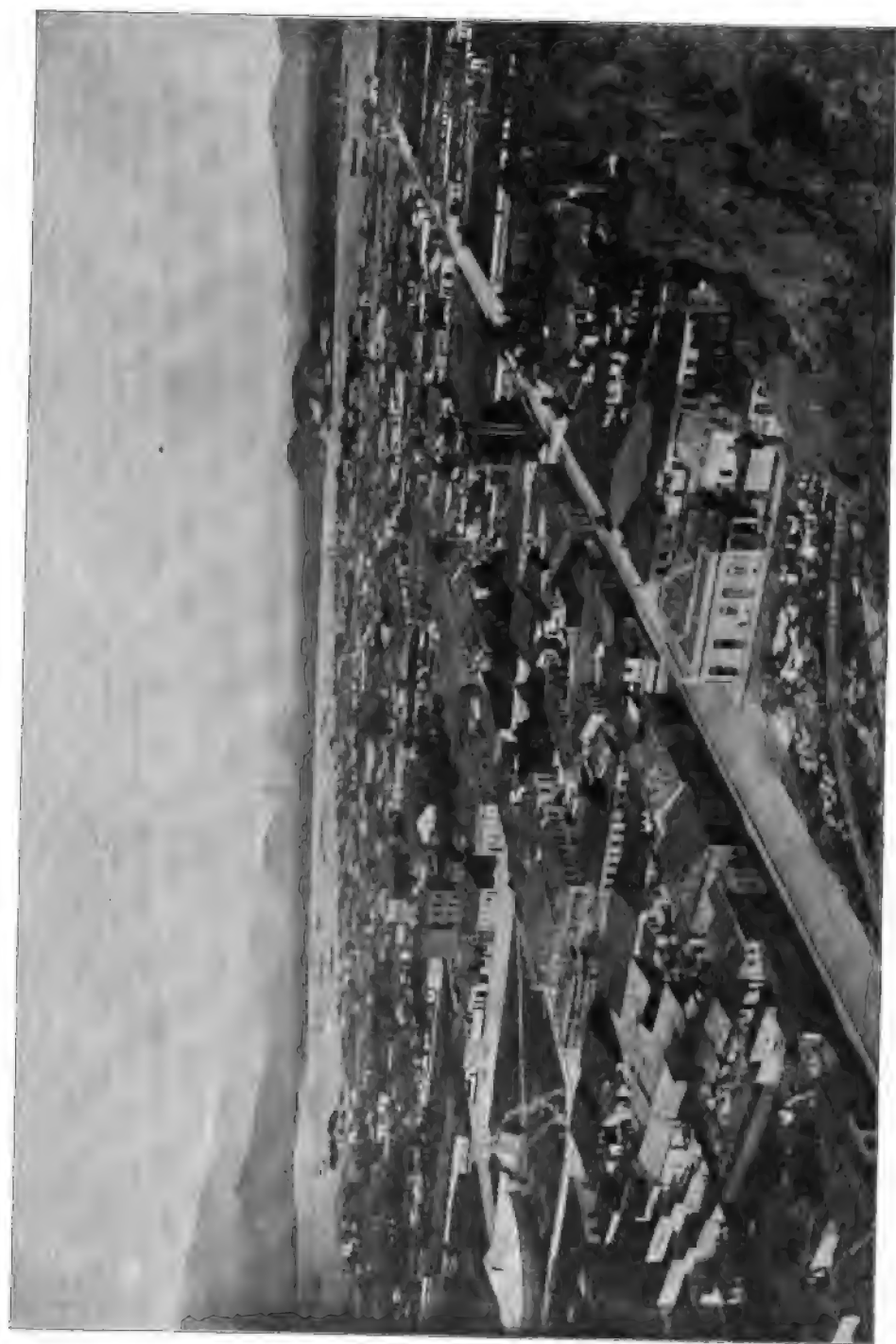
ONE OF BRAZIL'S NORMAL SCHOOLS

a lot of them there are! They go along a-train, one car following the other until they are beyond the business streets, when they separate so as to reach the various sections of the suburbs. Some of the cars are loaded with freight. A man with a basket cannot get into a first-class car, and people returning from market have to use the freight cars. There comes a car loaded with newspapers, for São Paulo has half-a-dozen dailies. We find newsboys selling papers on every corner. The negroes, we notice also, are numerous; there are more here than there are in Washington. There come three coloured men now!—

labourers on their way to work. Hear them talk as they pass! This one is laughing; his "yah! yah! yah!" is just like the laugh of one of our dark-skinned Americans, but the language of the conversation is Portuguese, and though we have heard the words we cannot see the joke. We go out into the suburbs. The houses on the edge of the city are as fine as our own. We visit the public buildings and find them also equal to those of the State capitals in our country, and I doubt if we have a college building which will compare with the Normal School of São Paulo.

It was by way of Santos that I came to São Paulo, passing through its malarious harbour, and spending some time in one of the unhealthiest cities in the world. Santos is seldom free from yellow fever, and at times even the sailors in the harbour are decimated by it. Some captains do not allow their men to go ashore while in port, and one steamship company has purchased an island near by, on which its sailors are housed while the ships are being loaded. The city, however, is beautifully situated. It lies right under the mountains, at the end of a winding waterway, about which our ship twisted this way and that as it sailed in from the Atlantic. The water was of a bilious green. Low hills and islands, covered with thick woods, rose in front of us, and smoky forbidding clouds hung over Santos like a pall. All nature was gloomy, and the surroundings made me feel as if I were in a valley of death. The air was soft, moist, and warm. Our steamer moved slowly in, rising and falling with the tide, the engine making a muffled sound on the soft still air. As we came nearer we could see coloured buildings lining the shore. Some were shaded by palm trees, their long fan-like leaves hanging listlessly and despairingly down. Closer still, and we reached a forest of masts. The harbour was filled with them, and among them were ships from Norway, England, Italy, and the United States. All were loading coffee, and we could see scores of negroes carrying great bags of the bean from the shore to the ships. The ships were anchored along a granite wharf, and the men walked up on planks carrying the coffee. On the other side of the wharf were long warehouses, whence came the coffee to the steamers.

We cast anchor some distance from the shore, and I arranged with a barefooted Portuguese to carry my luggage from the ship



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SANTOS, BRAZIL

to the customhouse, thence to the station. We rode in his little boat up through the harbour. The water was like glass. It was of a steel-blue colour, and from it came a smell like that from a barrel of water grown sour by being left out of doors in the sun. As we sailed, the boatman put his fingers to his nose and remarked: "Yellow fever"; upon which I showed him some sil-



RAILWAY UP THE COAST MOUNTAINS FROM SANTOS

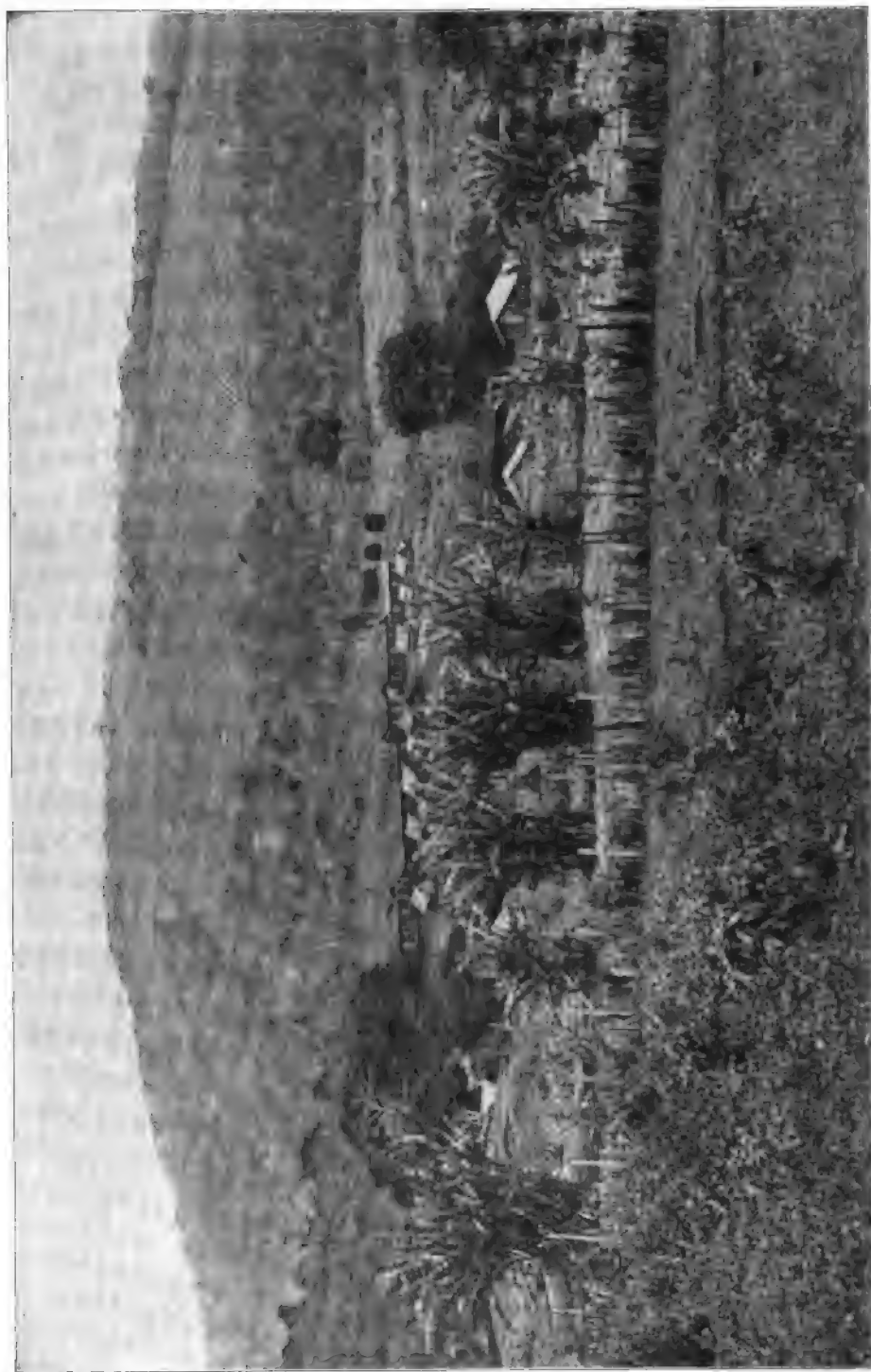
ver and urged him to hasten. He did so, and we finally reached the landing-place.

I spent some time in Santos wandering about its narrow streets. Its buildings are like those of a Dutch town; they are high, and are painted in all the colours of the rainbow. The city, though it has only 25,000 inhabitants, is a business one and does a vast trade. It is visited regularly by 20 lines of ocean

steamers; and among others by coffee ships from New York, for the bulk of the exports is of coffee. You see this as you walk through the streets: you go by warehouses filled with coffee; there is a smell of coffee in the air, and there are many large rooms in which half-naked negroes are shovelling coffee-beans into bags. There are rooms in which men and women are sorting coffee, singing at their work, and there are others still in which they are sewing up the bags for shipment.

There are cafés everywhere. I entered one and asked for a cup of coffee, wishing to drink it in this great coffee port. It was brought me by a white-aproned waiter and served without cream in a little porcelain cup not bigger than an egg-cup. I drank it; it was as black as ink, as strong as lye, and as hot as liquid-fire, but still very good and exceedingly cheap, for it cost me only one cent.

From Santos I came to São Paulo, the coffee metropolis, being carried over the mountains on one of the best railroads in Brazil. The railroad has a monopoly of the coffee transportation from São Paulo to Santos, and it carries so much coffee that it pays dividends sometimes of 50 per cent per annum. The train shoots out of Santos over the lowlands to the foot of the mountains. It climbs these by a series of cables moved by stationary steam-engines rising by three inclined planes to the plateau, about 3,000 feet above Santos. Here an ordinary locomotive is again fastened to the train and a ride of 30 or more miles brings one to São Paulo.




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A COFFEE PLANTATION

CHAPTER LI

A VISIT TO THE LARGEST COFFEE PLANTATION

AN ESTATE WHICH HAS 5,000,000 COFFEE TREES AND IS FORTY MILES AROUND
—HOW THE SOIL LOOKS, AND HOW COFFEE TREES ARE GROWN—PICKING
COFFEE AND PREPARING IT FOR THE MARKET—A RIDE OVER THE PLAN-
TATION ON ITS RAILROAD—ITS ITALIAN COLONIES, AND HOW THEY ARE
MANAGED—AMONG THE PRETTY COFFEE-SORTERS.

ROM São Paulo I took the railroad for the interior and went 300 miles inland to see the Dumont coffee fazenda, the biggest coffee plantation in the world. It has about 5,000,000 trees, and annually produces enough coffee to give every man, woman, and child in the United States a daily cup for a week. It is owned by an English syndicate, with a capital of several million dollars, and is operated after the most modern methods. In going to the Dumont fazenda I passed through some of the richest coffee plantations. I saw hundreds of thousands of acres of coffee trees, going by plantation after plantation where the men were at work picking coffee, and by vast cement floors upon which the coffee-beans were drying in the sun.

The colour of the best coffee lands is a bright red. It is exactly like brick dust, and in this ride I found everything of a brick-dust hue. The weather had been dry for some time, and the sun had turned the earth to powder. It filled the air with red clouds; and the bushes and trees were tinged with it.

The wind was blowing as I rode over the country, and my white collar soon acquired a red edging, my cuffs became a bright vermilion, my hands were coated red, and the only thing about me not seriously changed was my hair, which my friends indulgently call golden, but which those who like me not say is of this same coffee-soil colour—it has a brick-dust hue. Even the children at the stations looked like painted Indians. Unpleasant as the soil is in the shape of dust, it is said to be just the thing for coffee. It lies in beds from three to four feet deep upon a layer of gravel, and in it the coffee tree grows and waxes fat.

The best plantations are on the sides of the hills, at an elevation of from 1,000 to 3,000 feet above the sea. These are the altitudes of the rolling plains, through which I have been travelling. They are entirely covered with coffee. We were often for hours in nothing but coffee plantations, vast gardens of green bushes shining out against a background of red. Here the men were ploughing, there they were picking, and in other places they were hoeing. The trees were everywhere clean, and most of the plantations were as well cared for as a garden.

Now we passed by a forest which had just been cut down, and now by fields of cleared land, in which the stumps were still standing. In these I could see the little coffee plants which had been set in holes scooped out of the earth, the plants being shaded with sticks from the fierce rays of the sun. Later on, we went by great platforms of cement, upon which the coffee beans were drying, and back of them we could see the labourer's houses, red adobé huts with roofs of red tile. At last, after three hundred miles of such travelling, I came to the station of Rubeirão Preto, and here was met by an engine which Mr. Phillip Hammond, the manager of the Dumont fazenda, had sent down to take me to the estate. I had letters to him from the Secretary of Agriculture of São Paulo, and was therefore entertained right royally during the few days of my stay.

Those who think that coffee grows almost wild have little idea of the business of a great plantation like the Dumont enterprise. There is not a bonanza farm in the United States, I venture to say, that costs as much annually, or one that employs so many hands. The estate itself comprises thousands of acres. It has over 13,000 acres of coffee fields and 2,500 acres of pasture land. It is planting more trees every year and is kept like a garden. To go round the estate one would have to travel 40 miles, and more than 40 miles of railroad track have been built upon it to transport the coffee.

The estate supports 5,000 people. It has 23 colonies, ranging in size from 70 families downward. It has great stores to supply its workmen with food. It has a bakery, a drug store, a saw mill, a planing mill, and at one time it had a brewery. It has vast factories for cleaning coffee and preparing it for market, and it has offices in which there are bookkeepers taking account of every item of expense, so that they can tell you how much coffee

each of the 5,000,000 trees is producing, and give every item connected with picking the coffee and sending it to the sea-ports.

The labourers on the estate are thoroughly organized. Each man has his own work, the employés being directed by administrators, each of whom has charge of a block of trees, ranging up to a million; these trees are divided among families, each family taking charge of from 3,000 to 4,000 trees, planting them and keeping them clean. At picking-time all the employés are set to work to gather the coffee berries and bring them to the cars. One man can pick enough berries in a day to make about 50 pounds of coffee. There are also train loads of coffee berries moving to and from the fields and the factories, and within a few weeks 70,000 bags of coffee-beans will be shelled out, dried, and shipped.

Obviously, it takes a great deal of work to produce the beverage which forms the staple of one's breakfast. In the first place, the trees must be sprouted in seed-beds, the beans being sown much as we sow peas. Only the best coffee-beans are chosen for the purpose. When the coffee plants are about eighteen months old, they have grown a foot high. They are then taken up and planted deep in the ground, being shielded with leaves on sticks. They grow very fast when well ploughed, hoed, and kept clean.

At three or four years of age the coffee tree begins to bear fruit. Little red berries, the size and colour of a cherry, appear close to the branches, hanging to them much like plums. They continue to have fruit from this time on for twenty or thirty years, and some trees will keep on producing for forty or even fifty years. A good tree should produce four pounds annually, and a well-cared-for coffee plantation should be good for at least thirty years.

The coffee begins to blossom in September, and in April or May the berries are ripe and the picking begins. The berries are picked into baskets, which the pickers carry on their backs. Each is paid so much for the amount picked, and hundreds of men, women, and children are employed.

This seems a lot of work for such a little thing as a coffee-bean. Yes, but the preparing the bean for market has as yet hardly begun. The berries, as they come from the trees, are

just like dark-red cherries; the coffee-beans are the seeds inside the cherries. Each large cherry has two half-round seeds, the flat sides resting one against the other, with a soft pulp about them. Others have only one little round seed, just like the Mocha coffee of commerce. The pulp must first be taken off. To do this, the berries are thrown into a hopper and run through cylinders that squash the pulp without injuring the grains. They are thus reduced to a mush of pulp and coffee-seeds. This mixture is carried over a long copper cylinder, which is about two feet in diameter. The cylinder is filled with holes, just large enough for the coffee-beans to pass through. As the mush falls on the cylinder, the beans go through the holes into it and are carried into a canal of flowing water below the cylinder. Upon this they float off into receiving tanks or vats.

Take up a handful of the beans and look at them. Each, it will be seen, is covered with a soft, gummy substance; it is as sticky as though it had been painted with mucilage. It must be washed again before it is ready for drying; this is done in a tank in which a great screw moves round and round over the beans, scouring off the gum, as it were, and leaving them as white as parchment.

"But our coffee-beans are green," I hear some one say. Yes, they are, and these will be green by and by. They have two shells on them which must be removed before they can be shipped to market. Before the shells can be taken off, the coffee must be perfectly dry, and the drying is quite a task of its own. There are on every plantation great terraces made of floors of cement, rising one above the other. Some of the floors are more than an acre in size. They are made for drying the coffee. There is no roof over them, and the hot sun of Brazil beats down on them all day long. It gradually takes all the moisture out of the beans which are stirred about with wooden rakes, so that all parts are touched by the sun. The men who handle the rakes are in their bare feet. It is important that the coffee be evenly dried, and it often takes a long time to cure it. The grains sometimes lie for two months on the platforms, being gathered into piles at night and covered up to keep off the dew. The men watch also for showers, and at such times cover the coffee.

After the beans are dried, they are by no means ready for sale; each little bean has now to be skinned. It has upon it a thick

white hide, known as the parchment skin, and under this another covering almost as thin as a cobweb, which is called the silver skin. These have to be removed before the olive-green bean sold in our stores is reached. The skinning is done by expensive machines, some of which cost as much as \$25,000. In the first place, the coffee is run through a ventilator, which fans off the rubbish and dust. It is next thrown into a great corrugated wheel of cast iron, which has grooves so graduated that they break the skin on the coffee without hurting or scratching the bean. After the skin is broken, the beans are carried to a second ventilator, in which the shells are taken off like the chaff in a threshing-machine. A fan blows off the chaff and the beans flow down through the trough to the separator.

The beans are now of a light olive-green colour. They must be graded, however, before they are shipped. The little round beans which came from the small berries on the ends of the stalks will go into one grade and will be sold in our American markets as Mocha straight from Arabia; another size will be classed as Java, and the well-known Mocha and Java which one mixes at home will possibly have come from the same stalk. Other kinds of grain will be classed according to their grades, and from every lot five different grades are put up.

One of the most interesting sights on the plantation is the factory in which the women sort the coffee, picking out the bad beans. Come with me and look at it. We are in a vast room filled with Italian girls of all ages. They sit at long tables at the back of which are boxes of green coffee-seeds. Just opposite each girl is a little opening in the box, out of which she pulls handfuls of olive-hued grains and spreads them out on the table before her. She looks them carefully over, picks out such as are bad, and throws them into a box at the right, sweeping at the same time the good grains through a hole in the table, so that they fall into a bag, which is fastened beneath, and hangs there between her knees.

Some of the girls are quite pretty. They have the large eyes and the bronzed rosy faces of Neapolitan peasants. They have gay handkerchiefs tied about their heads, and as you enter the room their great dark eyes look at you. Nearly all are bare-footed, and I noticed that some of them dug their pink toes into the bags as they worked. As soon as a bag is full it is carried

away by men to the sewers, who fasten it up for shipment. At the back of the room are fanning and cleaning machines, through which coffee of the various grades is running in a steady stream. A noise like that of a grist mill fills the room, and burning coffee titillates your nostrils with an appetizing odour. It comes from the rear of the building. Let us go there and learn what they are roasting. Outside we see a great stack of the parchment hull chaff; this is being used as fuel for the engine. It is the burning of the coffee-chaff that causes the smell.

But Mr. Hammond is ready with his special engine to take us the round of the plantation. It is an American locomotive, we notice, made in Delaware; we jump on and are carried for miles through this great coffee-garden. In front and behind us, as far as one can see, are long lines of green bushes. There are vast areas to the right and the left, all of coffee. Look down the road; see how the lines of bushes run on and on, growing smaller and smaller until they come together. Notice the bushes in that field over there! They are not as high as one's knee. Those trees have only been planted a year, and the others, farther on in the little holes with chips and sticks over them, have been there only a month.

How green everything is! The coffee-leaves seem to have been varnished. There is no green in nature more beautiful, and the contrast of the background of red soil throws the green out, making it still more beautiful. Now turn your back to the engine and look about you! We are now on a hill, and we can see the whole land spread out in a great waving mantle of green, through which, here and there, run stripes of bright red, the roads. What a principality! Job would have died of envy had he seen this plantation.

Notice the little green buds on that plant! They surround the joints of the branches like a necklace just over the leaves. Later on, they will be red berries, and later still will be turned into the coffee of commerce and will be travelling over the world. The beverage they furnish will be partaken of on the boulevards of Paris and sipped by the scandal-mongers in the drawing-rooms of Washington. Lovers, it may be, will whisper sweet nothings over it; statesmen may lay out their campaigns by it; and perhaps, in our lurid south, it may take part in one of those angry engagements which result in "coffee and pistols for two."

Within the last ten years great changes have taken place in coffee-growing in Brazil. Formerly, everything was done by slaves, who worked under overseers and who put in nearly fifteen hours a day. The overseer called them at four o'clock in the morning and marched them to the coffee-fields. Their meals were brought to them there, and they were kept at work until about seven o'clock in the evening. Now that the slaves are emancipated, most of them have left the coffee regions and Italians have been imported to take their places. The labourers on the Dumont fazenda are nearly all Italians; I am told they make far better workmen than the negroes.




COFFEE TREE WITH BERRIES

CHAPTER LII

MORE ABOUT COFFEE

BRAZIL, THE CHIEF COFFEE-COUNTRY OF THE WORLD—IT PRODUCES TWO-THIRDS OF ALL THE COFFEE USED BY MAN—WHERE THE COFFEE-FIELDS ARE, AND HOW THE PRODUCT IS HANDLED AT RIO AND SANTOS—THE KINDS OF COFFEE, AND WHY OUR MOCHA AND JAVA COFFEES COME FROM BRAZIL—BEHIND THE SCENES IN THE WAREHOUSES—HOW THE BEANS ARE POLISHED AND PAINTED UP FOR THE MARKET—COFFEE DETECTIVES AND COFFEE THIEVES.

 NIGHT'S ride north by railroad has brought me to Rio de Janeiro, the capital of Brazil. Rio is the centre of the coffee trade. It is financially and industrially, as well as politically the Brazilian capital, and while it does not ship so many bags of coffee as Santos ships, it furnishes most of the money that moves the crop. Coffee, indeed, is the mainstay of Brazil; it is its chief export and its chief money crop. Brazil produces more coffee than any other country in the world. From its plantations come two-thirds of all the coffee consumed. In 1895, the total exports amounted to \$180,000,000, and of this \$140,000,000 came from coffee. The amount shipped is so great that the rise or fall of a cent a pound means prosperity or the reverse. Of late years coffee has been falling; the prices of to-day are not more than one-third those received in 1893, and with the new plantations which will probably spring up in Porto Rico, in Hawaii, and in the Philippines, the price is likely to go still lower.

The United States has for many years been the chief consumer of Brazilian coffee; we drink more coffee individually than any other nation. In 1897 we used 10,000,000 pounds more than all Europe, and we are now annually consuming about 800,000,000 pounds, or more than ten pounds for each man, woman, and child among us. Within the past ten years we have spent \$875,000,000 for coffee, or an average of \$87,500,000 a year. The bulk of this money has gone to Brazil; some of it has found its way

into the pockets of the coffee-planters; a large part has been divided among the shippers and dealers; and eleven per cent of the export price has been paid to the government. Brazil charges a coffee export duty of eleven per cent per pound; this, of course, is paid by the consumer, and such of our people as engage in coffee-raising will have the advantage of eleven per cent over Brazil to start with, for they will, of course, not have to pay duty. Some years ago there was talk of taxing coffee, but our congressional demagogues objected to taxing the poor man's luxuries, and coffee was admitted nominally free. It was not allowed to be free, however, for Brazil at once put on an extra export duty and the poor man's luxury cost him just the same. The only difference was that the Brazilian government got the money, and not Uncle Sam.



SANTOS, BRAZIL'S GREAT COFFEE PORT

Coffee is raised in nearly every one of the Brazilian States. The country produced 10,000,000 bags last year, and it is still setting out new plantations. I have already described my travels through São Paulo, the richest coffee-raising region in the world. The States north of São Paulo are rich coffee states, and Rio de Janeiro, back of the capital, is one of the chief coffee-centers.

Brazilian coffee is chiefly known in the United States as Rio and Santos coffee. The names come from the ports from which the coffee is shipped. The Santos coffee is grown almost entirely in south central Brazil; it is carried on the railroads to Santos and exported from there. It comes from a cooler climate than does the coffee raised farther north, and is generally considered to have a milder and finer flavour. It is estimated that the

United States take about 30 per cent of the Santos crop and about 70 per cent of all shipped from Rio, so that the bulk of our coffee is Rio coffee.

At both Rio de Janeiro and Santos the great coffee-houses of the United States have their agents who buy of the dealers and ship direct to their houses in New York, Baltimore, and Chicago. They have large establishments for preparing coffee for shipment, and some of the smartest coffee-merchants of the United States are here watching the markets and buying the product by the thousands of bags. Coffee is handled in different ways at the two great ports. While I was in Santos I spent some time among the dealers and shippers. There I found that the coffee is put up in bags, of 132 pounds each, and of this bulk it is sold to the exporters. The buyers in Santos deal directly with the planters' agents, taking the coffee in lots. In Rio the coffee first comes to commission men,—who in turn dispose of it to the wholesale dealers, who then grade and bag it for the exporter. In this way the coffee has passed through three hands before it arrives at New York.

Since the remarkable fall in the price of coffee, the chief exporters have sent agents out among the planters and are now buying the coffee direct. Hitherto the consumer has had to pay half a dozen or more profits on every pound of coffee; in the first place, he has had to support the planter, then the commission merchant in Rio, then the wholesale dealer in Rio, and the local agent of the United States. He has had to pay the cost of shipment to New York, the wholesale dealer or roaster there, the commercial drummer, the railroads, and lastly his retail dealer at home. With all these charges he is able to buy coffee for 15 cts. and even less per pound, the same coffee costing here not more than 6 cts., and delivered in New York 6½ cts. per pound.

If the consumer be particular about his coffee, he will pay 35 cts. or 40 cts. for some of this same coffee which here sells for a trifle over the sums above mentioned, the only difference being that the beans are of a little different shape or of larger size, and that they have been graded into certain so-called well-known varieties.

I have already mentioned the Mocha and Java coffee of Brazil. A large part of the Mocha used in the United States is

grown in Brazil. Indeed, but little genuine Mocha coffee is sold in our markets. The Mocha fields of Arabia are so small that but few of the berries are sent outside Mohammedan countries. Mr W. G. Palgrave, the well-known Oriental traveller, says that two-thirds of the Mocha crop is consumed in Arabia, Syria, and Egypt, and almost all of the remainder is taken by the Turks. The coffee is sifted over, grain by grain, and the best taken out for the Mohammedans.

The Rio coffee sold as Mocha is largely made up of the little round beans which are found on nearly every tree. In many



PICKING COFFEE

places they grow near the end of the stalk and are often imperfect berries, a coffee cherry containing one instead of two beans. They are known as pea-berries by some of the dealers. There is another class of beans which are flat. Some of these are very much like Java coffee and are often sold as such, so that many a man who smacks his lips over what he considers real Mocha and Java is actually drinking 7-cent Rio, although he has paid 35 cents a pound for it. This statement, it may be, will be denied by the grocers. They will likely tell you that they can tell Mocha and Java by the smell, or by the colour of the grain.

Don't believe them! The coffee as it comes from the plantation is often far different from that which is exported on the ships. I have visited, here in Rio, enormous establishments that make a business of painting and polishing coffee to suit the different markets. In South Africa, for example, the people want black coffee-beans; it seems the coffee they have been buying is of that colour. The Brazilian beans are naturally olive green; they are turned into a great mill and rolled round and round in contact with a coloured powder which paints them as black as any coffee that can be grown in Africa. Other grades are given a tinge of yellow, and others still are varnished in different shades of green. I should suppose that some of the colouring matter is unhealthful, for the men use gloves when they handle it. In one Portuguese house, I saw about 4,000,000 pounds of coffee being coloured for the Cape of Good Hope, and in another they were polishing coffee for the Argentine market. This is no fiction, for I saw it myself, although I am told that the coffee sent to the United States goes there in its natural colour.

The big coffee factories are interesting places. Some of them have as much machinery as a Minneapolis flour-mill. You walk under a network of moving belts, through air mixed with coffee dust, and go from room to room filled with machines for dressing the beans to suit the various markets. Each market seems to have its own wants; the Germans, for instance, demand that the husks be on the beans when they arrive at Hamburg. They prefer to do the shelling themselves; they do the polishing of the beans, and the coffee so prepared is sold as washed coffee, bringing a much higher price.

There are other peoples who want their coffee polished. It is shined up as you shine silver, being so delicately brushed that the grains are not injured. The coffee that goes to the United States is sold as it comes from the plantations. It is passed through the separators and graded, but so far, I believe, not polished or sold in any other than its natural colour. A great deal of our coffee is bought by the roasting companies. It is shipped directly to roasting mills in New York and Chicago, where it is browned and ground and put up in the fancy one-pound packages sold by the grocers.

One of the busiest places in South America is the coffee-exporting section of Rio de Janeiro. There are huge warehouses

near the wharves which are filled with coffee, and into which coffee is being brought by thousands of bags. The streets of this section are narrow and dirty; they are filled with waggons and cars loaded with coffee. There are scores of half-naked men trotting from the cars to the warehouses with bags on their heads, and scores of negro women down on their knees sweeping up the coffee out of the cobblestones, where it has dropped, that they may wash it and sell it again. Each of the street-cleaners has a sieve, in which she puts the beans as she picks them up,



LOADING COFFEE—PORT OF SANTOS

shaking out the dirt as she works. I am told that many of the women make a good living by gathering these stray coffee-beans.

Stop a minute and watch the men as they unload the waggons! Every bag is tested before it is taken into the warehouse. The tester has a little tin pipe about as large around as a broom-stick, with a sharp point on the end; this he jabs into a bag and it brings out a handful of coffee. A glance at the beans tells him whether they are according to sample, and if not, the remainder of the load is carefully watched.

But let us follow the coffee into the warehouse. The car-load which is now being handled has to be repacked before it is

ready for shipping. We walk through long aisles, walled on each side with coffee-bags, and come into a hall where the floor is covered with piles of green coffee-beans. At each pile are a dozen half-naked negroes in their bare feet. They are scooping up the coffee into bowls, much like bread bowls, and pouring it from them into the bags. We hear the scratch, scratch, scratch of the bowls as they touch the floor, varied by the light laughter of the people at work. Now the men burst out in a song, keeping time with their scoops as they sing. As soon as a bag is filled, it is drawn off to a pair of scales to be weighed. It is next handed over to women, who sew up its mouth, leaving enough vacant space at the top that it may pack well in the steamer. In other factories the bagging is done by machinery, and all the work goes on in a business-like way.

Each of the American establishments of Rio annually handles vast amounts of coffee. Its manager must be a sharp trader and a man of business ability; he must be a good judge of coffee, and must know how to take advantage of the rise and fall of the market. Each establishment has its coffee-expert, who can tell instantly by eye and nose just what the coffee is worth. His judgment is usually passed without grinding or burning the berries. Samples of about a pint each are spread out on blue paper, and the coffee-expert puts his price on each grade by looking at, handling, and smelling the samples.

The coffee of Rio is chiefly shipped from the coffee-wharves. They are not far from the warehouses, and the scenes about them are among the most interesting in Brazil. Come with me and look at them! We jump upon a car, containing three tons of coffee; it is hauled by two mules, who drag it over the street railroad, through one narrow alley after another, down to the bay. We stop at the wharves, where a gang of negroes stands ready to take in the bags; they back themselves up against the cars and balance the great sacks on their heads. They carry them in on the trot, and we hear the thud, thud, thud of their bare feet as they go over the floor. They run, for they are paid by the piece, and not by the day. Each man gets a cent and a-half for every bag he brings in, and the best of the workmen make from \$35 to \$40 per month, which is considered high wages here.

What a lot of policemen there are everywhere! At the ends of the wharves there are policemen in uniform; a custom-


house officer is always on hand to see that nothing goes on or off the ship without paying duty; and there are besides many private detectives. A close watch has to be kept to guard against stealing, for the wharves are great places for thieves. The detectives look below the wharves, as well as above them, for sometimes thieves come in boats under the wooden floors and stop below one of the great piles of bags. With an auger they make a hole through the floor, then a piercer or pipe is thrust up through the hole and into a bag, so that the coffee pours down through the pipe in a stream to the boat. In a short time half a dozen bags can thus be emptied and no one be the wiser, unless the detectives spy the men under the wharves.

Stealing is also done by the negroes who unload the coffee. They come to their work with piercers in their sleeves. By a dexterous thrust they drive the piercer into a bag as they are carrying it in on their heads and allow some of the coffee to roll down their sleeves to their waists. This they do with one bag after another, as they readily can during the day, and, on the pretence of getting a drink, go off now and then to secrete their stealings. This mode of stealing is well known, and the men are consequently carefully watched. Some of them work half-naked, while others have their sleeves rolled up to their shoulders. Thieves are at once arrested, and the factors pay large sums to detectives who watch out for pilferers.

CHAPTER LIII

IN RIO DE JANEIRO

THE LARGEST PORTUGUESE CITY IN THE WORLD—A LOOK AT THE HARBOUR OF RIO, AND A VISIT TO ITS BOTANICAL GARDENS—A WALK ON THE OUVIDOR—STRANGE STREET SCENES—AUCTIONS AND LOTTERIES—A VISIT TO THE MARKETS—LIFE IN THE RESTAURANTS AND CAFÉS—WHAT GOOD COFFEE IS—A NERVOUS NATION, ALWAYS ON THE TWITCH.

RIO DE JANEIRO is next to Buenos Aires the largest city in South America. It has 700,000 inhabitants, while Buenos Aires claims 100,000 more. Buenos Aires is by far the largest Spanish-speaking city in the world: Rio de Janeiro is the largest city in which the people speak Portuguese. It has more people than all the cities of Portugal combined, and the country it governs contains three times as many Portuguese as there are in Portugal itself. It is the capital of Brazil, the metropolis of half the land and half the people of the South American continent; it is, moreover, the chief financial and industrial city of what is now the greatest undeveloped industrial empire in the world.

We Americans go to Europe by the hundred-thousand every year to gratify our love of strange sights and beautiful scenes. We leap over the Atlantic, one after the other, like a flock of sheep following their leader over a fence, never turning aside to see if there are not better pastures or more agreeable fields nearer home. The result is that we miss the wonders of our own country and continent. South America is far stranger than Europe, and it has scenery that will vie with any on earth.

Take Rio de Janeiro, for example; it is one of the most picturesque of cities. It lies on a beautiful bay, at the foot of great mountains, which rise like a wall with their tops in the clouds behind it. These mountains, which are covered with a tropical vegetation from base to summit, are of curious shapes, one being a sugar loaf, 1,300 feet high; another a hunchback;



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BAMBOO GROVES, BOTANIC GARDENS

while others look like great forts and massive battlements. I have seen the Bay of Naples and the Golden Horn at Constantinople, but the harbour of Rio surpasses anything on the Mediterranean or the Bosphorus. Shaped like a pear, it is 100 miles in circumference, and almost everywhere more than 60 feet deep. All the ships of all the seas could anchor within it and have room to spare. It is dotted with islands, upon some of which fine buildings have been constructed, so that they apparently float upon the water.

Rio itself is full of strange things. The average traveller, scared by the ghost of yellow fever, comes to it, his brain throbbing with quinine, and with the film of fear over his eyes. He walks through the streets with a smelling-bottle under his nose, and shoots in and out of the town without knowing its beauties. To me Rio's streets are pictures. I wander in and out of narrow lanes as crooked as the cow-paths of Boston. I see houses, which are centuries old, whose foundations were laid before Boston came into existence. I find beautiful parks, clean and well kept, and in them the most royal vegetation out of Paradise. There are bamboos here which are 50 feet high, whose feathery arms interlock and make regal avenues in which you are shielded from the heat of the sun. There are flowers growing wild which we raise in our hothouses, and there are royal palms whose branches wave in the winds more than 150 feet above the ground.

Rio is the home of the royal palm; you see it all over the city. The trees are as round and straight and smooth as the most beautiful column ever chipped by a sculptor. They rise in symmetrical shafts of silver gray from 100 to 150 feet without a branch, and end at last in a canopy of beautiful green fern-like leaves. Some of the residences have rows of royal palms at the entrances to their gardens. They do not need marble columns, for nature furnishes these trees in their place.

One of the finest avenues of palms is in the botanical gardens, but there are other parks, of which you seldom hear, that have trees quite as fine. The other day I passed through a street in the heart of Rio in which there were four rows of these lofty trees. The grove was at least a mile long, and each palm was on an average 100 feet high. It was the most wonderful evidence of the God-like in nature I have ever seen.

The city of Rio de Janeiro covers about 9 square miles; it lies on a low plain between the mountains, and the harbour extends back to and for some distance up the hills. The streets go up and down, cross one another at all sorts of angles, making blocks of as many different shapes as those in Washington. The old part of the city is very narrow and quaint, some of the streets near the wharves being so low that they are flooded by every rain that falls. In this quarter are the slums of the town, where yellow fever is rampant in summer, and where the stranger almost



THE BAY OF RIO

takes his life in his hands when he goes through. Large families are to be found living in one room, and everything is squalid and dirty. This part of Rio is so badly arranged as to sanitary matters that the very stones breathe miasma. The sun never gets a fair chance at the streets, for they are so narrow that the street-cars almost graze the sidewalk. The car-drivers are no respecters of persons, although I doubt that the numerous one-legged men of Rio have all been made so, as some claim, by losing their legs by the tram-cars.



PALM ALLEY, BOTANIC GARDENS

A little back of the slums is a vast quarter in which most of the business of Rio is done. This is also an old part of the city; some of the houses are moss-grown, and almost all are quaint and picturesque. Here are the chief clubs, the famed restaurants, and the most attractive shops. It is here you find the Rua do Ouvidor, the chief shopping street, the gossiping-place, the Rialto of the Brazilian capital. It has the best stores; it has the great newspapers, and the best of everything that the Brazilians think good. Here are thousands of men and boys who come for nothing else than to shake hands and talk, to see and to be seen. It is on the Ouvidor that the politician holds his reception. Here the candidate comes to feel the pulse of the people, and here revolutions and uprisings are hatched. I was walking down the Rua do Ouvidor the other day with our Minister to Brazil; we were on our way to visit the houses of congress, and I urged the minister to hurry, fearing that we might be too late. The minister replied:

"There is no danger. We are in plenty of time, and I am sure congress is still sitting."

"How can you tell?" asked I. "Where is the building? Does the Brazilian flag float from it as our flag floats from the capitol when the houses are sitting?"

"Oh, no," replied the minister; "you can't see the houses of congress from here. They are more than a mile away in another part of the city, but I know that congress has not yet adjourned because there are so few silk hats on the Ouvidor. Every senator and deputy wears a tall hat, and all rush for the Ouvidor as soon as the session is over."

There are things on the Ouvidor, however, which are quite as interesting as the politicians. The streets are filled with strange characters. At times you imagine yourself in Naples; at others in Paris, and again in the Moski at Cairo. The Ouvidor is as narrow as the Moski; it is indeed so narrow that by law no animal or wheeled vehicle is allowed to enter it. It is lined with one, two, and three-story houses, the walls of which are painted white, blue, brown, pink, yellow, and all imaginable colours. The roofs are so irregular that they cut the sky-line, looking like the ragged edge of an old saw. The houses on the opposite sides of the street lean toward each other, as in some of the old cities of Germany.

Every building has a flag-pole extending out so far from its second-story windows and at such an angle, that those on the opposite sides of the street almost touch in the centre; they form a very thicket of poles and make a canopy over the crowd below. Between the poles, from building to building, are arches of iron gas-pipes running from one side of the street to the other. These are used to illuminate the Ouvidor on feast-days, for the Brazilians are fond of displays of flags and illuminations, and they celebrate continually.

It is under this canopy that we move through the Ouvidor jostled by a crowd composed of all nations. There are Italians, Portuguese, Spaniards, French, Brazilians, and English. There are swells wearing silk hats and long coats, and there are half-naked negroes, with loads on their heads. There are lottery peddlers on every street corner. They pester us offering tickets wherever we stop, and if we enter a restaurant they will follow us there and thrust their tickets into our faces. The Brazilians are a nation of gamblers. The country is honeycombed with lotteries, and everyone bets on something or other.

Among the curious sights of the street are the hucksters. There come two men each with a baby-crib on his head. The crib is lined with a red flannel blanket, and as we look we listen for the squall of the infant within. As the men come closer we see that the cribs hold bread, and not babies. Each contains many small loaves, and the man goes with his wares from block to block, carrying a trestle with him, upon which he places the bread-crib while he waits for customers. Chickens are peddled in much the same way. A score of fowls are put in a wicker crate and the huckster walks from house to house with the crate on his head, the chickens crowing and fighting as he goes through the streets.

But let us look at the stores. The Ouvidor has fine show windows; walking through it is like passing through a museum. Here is a jewellery establishment; what a lot of diamonds and precious stones are displayed! Brazil is one of the best diamond markets in the world; the people are said to care more for their dress than their stomachs. You can see this better by looking at the tailor shops and millinery stores. The styles come from Paris, and the goods are marked with such prices that cold chills run down your spine as you look. Think of paying 10,000 and 20,000

a yard for silks, and of common dresses marked 2,000, 3,000, and 4,000 per yard. What can the figures mean? If they mean cents they would bankrupt one to buy any of them. Don't be alarmed, however; they are not cents or dollars. They are Brazilian *reis*



A RIO NEGRESS

of which one thousand are worth fifteen cents of our money, so that you get seven thousand reis for a dollar. I changed two hundred gold dollars at the bank and received in exchange more than a million and a quarter reis. This seems to be an enormous amount, but at my present rate of expenses the sum

will not last me three weeks. The fact that the goods are marked is no index of how they are sold. Everything goes by dicker, and the wise buyer always offers less than is asked. A large part of the business is done by auction. I found it the same in Argentina. There is scarcely a street in Buenos Aires or Rio de Janeiro which has not several auction establishments. Everything, even drugs, is sold at auction; you can bid on all sorts of articles from a pill to a palace, and from a plant to a plantation.

The Rio markets are not far from the Ouvidor. They are right on the bay, so that the fish are brought in boats to the stone wharves and there sold in lots. Here the hucksters come with their baskets for the supplies which they peddle about from house to house; from here are also taken the fish that supply the stalls in the markets. Most of the peddling is done by Italians, who carry fish and vegetables in baskets hung at the ends of poles that rest on their shoulders.

Let us go into the markets; they are housed in long buildings back from the water. We find them filled with all kinds of fruits, vegetables, and meats. There are tons of onions, carloads of tomatoes, and peppers of all kinds, from the big green sort we use for pickles to chillis, little red pills of a fiery nature that will take the skin from your stomach and tongue.

How queerly they sell things here! Onions are put up in strings about two yards long, the stems of the onions being interwoven with straw. What fine onions they are! Those over there are as big as your fist; they come from Portugal, and if you ask you will find that great quantities of things are imported. Grapes are brought by the ship-load from Portugal. They bring from thirty cents to three dollars per pound, according to quality and the state of the market. There are besides fine apples from Spain, carefully wrapped in paper, and bring from sixty to ninety cents a dozen. We wonder at the extent of this importation, for Brazil, if she were so minded, could raise everything for herself. She has an excellent soil and her climate is so varied, according to altitudes, that she can produce almost all varieties of fruits and vegetables.

Meat is sold by the kilogram. It is cheap, steak bringing about eight cents a pound. It surprises one to note that dried meat brings more than fresh meat. It is worth ten cents a

pound, and is the food in general use among the common people and indeed among all classes. It is brought by the shipload to Rio de Janeiro from Argentina and Uruguay, being corded up in the stores as we cord up hides. The meat is sold in flat sheets, each about one or two inches thick. It has a strong smell and is somewhat salty. When sold it is cut up in strips and weighed out by the kilo. Another high-priced meat is fat pork. This is stripped from the hogs, salted and done up in rolls of about a foot in diameter and two feet in length. Slices from the roll are cut off for each customer, according to order. The fat is used for cooking with beans, which with the *carne secca*, or jerked meat, form a part of almost every Brazilian meal.

There are restaurants and cafés near the market; indeed, there are cafés everywhere in Rio. Brazilians drink coffee as the Germans drink beer; they drink so much that it gets into their complexions, and every other man you meet is coffee-coloured. Some are jet black, some are brown and some sallow, but all are darker than nature made them. The usual price for a cup of coffee is a cent and a-half, and for this you get coffee fit for a king. It is freshly made, and so strong that it stirs your nerves like a cocktail. According to a naughty Brazilian proverb, good coffee should be "as strong as the devil, as black as ink, as hot as hell, and as sweet as love." I have not had a great deal of experience with hell and the devil, but from what I have heard of them, I imagine Brazilian coffee is like them in these particulars. It is perfectly black and is poured from the stove directly into the cups. The usual cup is about as large as an egg-cup, and the black fluid is of the consistency of Vermont maple syrup as thinned by our dear New Englanders for the market. As to sweetness, this is produced by half-filling the cup with cane-sugar, which is sweeter than the beet sugar we buy in the lump.

Drinking such coffee has a serious effect on the nerves, and as the Brazilians drink all day long they are among the most nervous of people. They are never still; if you see a man in a café with his feet on the floor, nine times out of ten one of his legs will be found bobbing up and down as though he were running a sewing-machine. If he tries to rest his muscles he can do so for only a few moments before they begin to twitch and

move about in all the antics of Saint Vitus's dance. Another thing which is conducive to nervousness is smoking. Adjoining every café is a cigarette shop, and nearly everyone you meet has a cigarette in his mouth. The people smoke between the courses at their meals, and the majority of the men, women, and children are saturated with nicotine.



A BANANA PLANTATION



POST OFFICE, RIO, BRAZIL

CHAPTER LIV

IN THE SWITZERLAND OF BRAZIL

PETROPOLIS, THE SUMMER RESORT OF THE CAPITAL—A TRIP UP THE ORGAN MOUNTAINS ON A COG RAILROAD—WHERE OUR MINISTER LIVES, AND WHERE DOM PEDRO HAD HIS PALACES—AN AMERICAN COLLEGE FOR GIRLS—WOMAN'S RIGHTS IN BRAZIL, AND SOME PECULIARITIES OF BRAZILIAN WOMEN.

HAVE you ever heard of Petropolis? It is where the president and the leading Brazilian officials spend their summers, and where the foreign diplomats live all the year round. It is in the mountains, just back of Rio, about half a mile above the level of the sea. The scenery about it is more like



PETROPOLIS, BRAZIL

Switzerland than the tropics, and its climate is such that yellow fever is a stranger to it. Suppose you could put a range of hills

3,000 feet high just back of New York or Philadelphia, and away up on their tops build a beautiful city of say 20,000 inhabitants. Suppose you could reach this by a short ride across the most beautiful bay in the world, and climb the hills by a cog-road like that which goes up Mount Washington. If you can imagine this, you have Petropolis.

To get to it you ride twelve miles on a steamer. Next there are cars that whisk you over the swamps to the foot of the mountains, where a little Baldwin locomotive waits to pull you



RAILWAY VIADUCT NEAR PETROPOLIS—"WE GO OVER RAVINES"

up an inclined plane so steep that you have to keep your feet on your valise to prevent it rolling down to the end of the car. The ride is wonderfully beautiful. Great trees loaded with orchids stand high above the jungle of matted green bushes. There are fern trees waving their myriad arms at the train, and tall feathery bamboos rustle in the breeze as the little engine puffs by. Now you are on the side of a green mountain hanging over a ravine 500 feet deep and under a great green spotted wall 4,000 feet high. Now you round a curve and the rocks rise



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UNCLE SAM IN BRAZIL—OUR LEGATION AT PETROPOLIS

above you like a great fort. They are brown and grim. Massive blocks of stone weighing thousands of tons, each 1,000 feet thick, hang over you, and a mighty wall 2,000 feet high seems about to drop down upon you. I have seen some of the rock-wonders of the world. The Andes, the Himalayas, and the Alps all have their features of picturesque grandeur. The Garden of the Gods and the Yellowstone are each unique in their way, as is this coast range of Brazil. It is different from any other, is picturesque in the extreme, and gorgeous in its clothing of luxuriant verdure.

The views of Rio and its bay are magnificent, and the cloud effects vary with every ride. I have been living at Petropolis during my stay in this part of Brazil, and I go to and come from Rio daily. The other morning, when we left the tops of the mountains, Rio and the harbour were covered with billowy clouds. Not a tree or blade of grass could be seen, save on the mountains, and we looked down, as it seemed, upon a snow scene in the Arctic Ocean. At other times the clouds sailed in and out among these massive hills in streams of silver, which emptied out upon the plain into a great cloud-lake. You ride often through such clouds on your way to the bay, and if the clouds lift and the sun come out, you sail over that wonderful sapphire sheet of water to the red-roofed, white-walled city of Rio.

Petropolis is a combination of Switzerland and Japan—of the tropical and the temperate zones. The hills surrounding it are covered with verdure, for the pure air is moist and all things grow luxuriantly. A stream of water flows through the city, being crossed by red bridges that fit in well with the pleasing surroundings. Petropolis is a rich town, and its houses are very picturesque. One of the best homes is that of the American Legation, which is now presided over by Colonel Charles Page Bryan, our Minister to Brazil. The Legation building is a typical Brazilian villa of stone and stucco, with a large portico upheld by gray Doric columns. It is of one story, but it has many rooms; the ceilings are high and the rooms are large and airy. The house is lighted by electricity, which is furnished by the waterfalls near by. The house is situated just opposite the summer palace in which Dom Pedro lived. It has a beautiful garden, which is separated from the street by a stone fence, on one

of whose gate-posts is the coat of arms of the United States. Behind it the green hills rise precipitously, forming a green wall 500 feet high.

Entering the Legation grounds you walk among its rare plants and trees on a wide pathway to the front door. The camelia is with us a hothouse plant; it is here a tree, and those of the Legation gardens are masses of red, pink, and white blossoms. Then there are bushes of rhododendrons as big as good-sized haycocks, and azaleas the like of which you have never seen. There are a dozen different varieties of palms on the lawn, and at one side of the house there is a little orange grove, loaded with evergreen leaves, out of which show golden balls of fruit. During a breakfast at the Legation the Minister often eats oranges from his own trees, and his cook goes out just before the meal and gathers the bananas from the back-yard.

Another American institution in Petropolis is the college for girls, which is supported by the women of our Methodist Church, who pay ten cents apiece towards it. The college has American teachers; its students come from good Brazilian families, and its educational reputation among the natives is high. The college building is on the top of a hill above Petropolis; it was formerly the home of a rich Brazilian, and in its exterior it looks more like a palace than a school. Its rooms have ceilings about eighteen feet high; its bathroom is as big as the average American parlour; and it has a shower-bath attached and a swimming-pool. The school-rooms are equipped with American desks and all the latest appliances in the way of education, such as models, maps, and mathematical instruments.

Schools of this kind cannot but do great good in Brazil, for female education has an indifferent place among the people. The women are not as far advanced as they are in Chili, in Argentina, or in Uruguay. They have not yet made their way into the telegraph offices, and girl bookkeepers are unknown. In Rio and in São Paulo there are telephone girls, but outside these cities about the only respectable occupations for women are school-teaching and going out as governesses. The "new woman" has not yet appeared south of the equator, and the chief end of woman is marriage. Marriage, however, is more a matter of love



GIRLS' SCHOOL, PETROPOLIS, BRAZIL

than is generally thought. The Brazilians make good husbands and fathers, and the women are good mothers. The parents love their children, and the children show great affection for their parents. A child here always kisses the hands of its elderly relatives, and men often kiss the hands of the women as a mark of respect.

The daily life of a Brazilian woman is different from that of her American sister. She does not spend much time on her dress before afternoon; indeed, she is rather slouchy and likes to take things easy. She often wears a "mother hubbard" wrapper until noon or goes about in a dressing-sack and a black skirt. She has a cup of coffee and a roll on rising and does not eat again until the noon breakfast. She frequently appears at breakfast with her hair down, and it is not until after the siesta which follows that she dresses herself up for her pose at the window.

You may see women looking out of the windows in any Brazilian town. They have cushions made to fit the window sills, upon which they rest their arms, and they often have padded stools or benches upon which they kneel while looking out. The Brazilian women spend more time on their knees than do any other women in the world; but, alas! it is not in prayer. The houses usually face the streets and are flush with the sidewalk. Each house has two or more windows on the first floor front, and each window has one or more Brazilian girls lolling on its sills, looking out. They are bareheaded, with flowers in their hair; they are, moreover, of all ages, from six to sixty, and many are in their teens. They watch the street-cars as they pass. If they see anyone whom they know, they crook their fingers at him as though beckoning him to come in. They do this also with their female friends. When I first saw the motion it seemed to me as though every maiden was after some one, but I soon learned that the beckoning was merely a form of salutation, meaning "good-day!" "hello!" or "how-do-you-do?"

The women of Brazil are very fond of candy, each has thirty-two teeth or less, and all of them sweet. They are fond of rich desserts, one of their favourite dishes being a light sponge-cake saturated with melted sugar as a sauce. Quince marmalade

is another favourite dish, as is also an exceedingly sweet guava cheese.

Brazilian women seldom go shopping. There is not a bargain-counter in any Brazilian store. Most of the purchases are made at home, all kinds of goods being carried through the streets by peddlers, who walk along slapping their yard-sticks as a sign of their trade. This custom, however, is dropping off now, but until lately almost all dry-goods were sold in this way.



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FERN TREE, BRAZIL

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CHAPTER LV

BAHIA, AND THE DIAMOND MINES

HOW THE PRECIOUS STONES ARE DUG OUT OF THE RIVERS OF BRAZIL—MINED BY NATIVE INDIANS, WHO DIVE FOR THE DIAMOND GRAVEL—CONCERNING THE CARBONS, OR BLACK DIAMONDS, FOUND NEAR BAHIA—THE GOLD MINES OF MINAS GERAES, AND THE NEW GOLD REGIONS OF NORTHERN BRAZIL—THE OLD CITY OF BAHIA, ONCE THE BRAZILIAN CAPITAL—ITS 200,000 PEOPLE, MOST OF WHOM ARE COLOURED—AMERICAN GOLD DOLLARS AS VEST BUTTONS.

FROM Rio de Janeiro I came by steamer two days north to Bahia, the former capital of Brazil. It is still a large city, only surpassed by Rio in size and in business. Bahia is situated on a bay as large as that of Rio de Janeiro. The bay is of the shape of a horseshoe, 10 miles wide at the entrance, 27 miles long, and in the centre about 20 miles wide. On the east side of it are huge bluffs, and on these Bahia is built. You see it as you enter the harbour, its white buildings rising out of palm trees over a wall of dense vegetation. There are two parts to the city, one down on the shore and the other built upon the bluff. The part on the shore is the business section, occupied by the importing and exporting houses. This section is worse smelling than the slums of Naples. There is a distinct and separate bad smell to every house, but the smell disappears to some extent as you mount the bluff; altogether the city is insanitary in the extreme.

Among the most familiar features of the city are the negroes, who are everywhere. Nearly every one you meet shows traces of negro blood; if not in complexion, then in the wide nostrils and semi-flat noses. There are many blacks, and the women have become famous for their size throughout Brazil. They are the fattest women I have ever seen. Some weigh three hundred pounds, and their dress is usually so light that you can easily see that their forms are not padded. It consists of a long

white chemise, without sleeves, cut low at the neck so that their satiny black arms and bosoms are somewhat exposed. In the neck of her chemise each woman has a lace-edging of beautiful



BRAZILIAN NEGRESS

design, through the meshes of which the black skin shows out. Nearly all have on white or gay-coloured turbans, and not a few wear shawls about their waists, which form overskirts to their chemises. Many go barefooted, but more wear heel-less slippers,



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BAHIA, BRAZIL

and so short that they can get little more than their toes into them, so that the heel of the shoe rests just under the instep. Among ordinary Caucasians such shoes would never do, but the Bahia black women have insteps that make you think of the old darkey's song about his sweetheart, wherein he says:

"And de hollow ob her foot makes a hole in de ground."

Many of the Bahia negresses are rich. Some wear half a dozen gold bracelets on each arm, a few display diamond rings, and many wear gold chains about their fat black necks.

Bahia has perhaps as many negroes to the population as has any city in Brazil. It was long the centre of the slave trade. The kidnappers ran their cargoes of slaves from Africa into its harbour and from here distributed the human freight to all parts of the Republic. Thousands of negroes were sent from Bahia to New Orleans. They were smuggled into the United States after the slave trade was prohibited, and into Brazil long after the importation of slaves was forbidden. Slavery existed in Brazil up to about ten years ago, and the result is that there are now more negroes in Bahia than whites. Nor is the colour-line distinct, the whites of Brazil have so intermarried with the negroes; indeed, you can now find few white families who have not some negro blood.

Negroes in Brazil have an absolute equality with the whites. No one thinks of objecting to their presence at the tables in the dining-rooms of the hotels or the steamboats. On the coasting vessel on which I came to Bahia, two-thirds of the passengers were coloured, and many of the coloured men were better dressed than I. Some of them were very intelligent, and not a few were property-owners. I find the coloured people in all sorts of positions. The editor and proprietor of one of the daily newspapers of Rio de Janeiro is a coal black African, and at one of our American minister's receptions I met the bishop of Amazonas, whose face is a mahogany brown. His Blessedness was dressed in a beautiful cardinal gown; he had a cardinal skull-cap on his head; and his hands, on one of which was the big ring of office, were covered with a pair of cardinal gloves. He spoke French fluently and proved to be a very intelligent man.

The walls of the Bahia houses look like mashed rainbows, for they are painted in all colours. There are scores of white houses,

houses of rose pink, and houses of sky blue. There are some buildings which make you think of the old song:

"I once knew a fellow,
He was not at all yellow,
But altogether green."

There are houses here the exact hue of the palm trees which shade them, houses as red as blood, and houses as yellow as gold. There are houses faced with porcelain tiles imported from Europe. Many of the windows are covered with a lace work of wrought iron, and over the doors are decorations of the same metal. The designs are original, and the negroes are the designers. These features make Bahia picturesque. Many of the houses are ancient, for the city is one of the oldest on the continent. Its babies had grown up and become gray-haired men before New York or Boston sprang into existence. Its bay was discovered eight years after Columbus first crossed the Atlantic, and it was settled by the Portuguese. Then the Dutch came and tried to drive the Portuguese out. They built houses and left their marks on the town. The English also tried to take possession, but the Portuguese finally conquered, and Bahia is a Portuguese-Brazilian city to-day. It is a city of considerable culture. It has some of the best schools in Brazil, and its people pride themselves on its medical colleges and hospitals. The country about is but little settled and not much developed, though in the future it will probably have a much larger population.

I see many American gold dollars here in Bahia. They are used by the dandies of the city for buttons on their white vests, and the demand for them is such that they are far above par. Our consul tells me that there are probably ten thousand of them so used in Bahia alone. The people are crazy for them; the black women want them for chains, charms, and bangles, and they are especially in demand to be hung around the waists of newborn babies. These coloured people have an idea that such charms bring good luck. The poorer babies have silver hung about their waists, and nearly every little boy I see on the streets has a string of charms about his neck or loins, although he often has nothing else.

Speaking of coins, all kinds of hard money are at a premium in Bahia. Even the nickels you find in Rio and farther south



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BAHIA, BRAZIL, FROM THE WATER FRONT

are not common; their places are taken by street-car tickets, railroad tickets, and private shinplasters. You see gold and silver only in the windows of the banks or on the counters of the money-changers. The bank notes in circulation are those of Brazil, which are in denominations of tens of reis. It now takes one thousand reis to make fifteen cents in our currency, but exchange goes up and down every day, and many people make money in speculating.

Bahia is the starting-point for the chief diamond fields of Brazil. The diamonds are found in the wilds far back of the city, along the sources of the Paraguassu river. They lie in the gravel in the bed of the stream, and are dug up by native divers, who scoop up the gravel and carry it to the shore. The shallow places have long since been worked over, and those left are so deep that it is only during the low water of the dry season that any mining can be done. At such times the divers select a place where the current is not too rapid, and drive a pole down into the centre of the river. They then row out to the pole, and one of them who is naked dives to the bottom. He takes a sack with him which is kept open by an iron ring sewed in the top. There is usually a lot of mud or silt above the diamond gravel; the man has first to scrape this off; he then fills his sack with the gravel, removing all he can down to the clay. As soon as the sack is filled, he signals to the man in the canoe above and is pulled up by a rope, aiding himself in his ascent by the pole. After two or three bags have been emptied into the canoe, it is then rowed to the shore and the gravel is dumped out, far enough away to prevent any loss by a sudden rise in the river. More gravel is taken out from day to day during the dry season, and when the rains begin, the deposit is all washed over for carbons and diamonds.

Bahia is one of the chief diamond markets in Brazil. It is also the chief market for carbons, and it is the best place in Brazil to learn about the diamond trade. Brazil was for many years the chief diamond country in the world. It was in 1727, in the province of Minas Geraes, that diamonds were first discovered. They were being used there by the negro slaves as counters in playing cards. Later on, mines were discovered in Bahia, and for a time Bahia produced some of the best stones.

For years something like a million dollars' worth of stones annually came from Brazil. Most of the stones were small, rarely exceeding twenty carats, although the "Star of the South," discovered in 1854, weighed before cutting 254 carats. When the South African diamond fields were discovered, in 1867, the Brazilian mines dropped into insignificance. At present they do not compare with the African mines. Still diamonds are being taken out every year, and with modern machinery no one can tell what may yet be found.

There is now more money in carbons than in diamonds. Carbons are impure diamonds of a black or brown colour. They are about as hard as a diamond, but more porous. They are used to make fine boring-machines and for polishing hard substances. They are found in all sizes, from little ones as big as a grain of sand to some that weigh hundreds of carats. A carat is a weight so small that it takes more than 160 of them to make one ounce troy. Not long ago carbons were selling for \$20 a carat, and one recently found was so large that it brought \$25,000. This weighed, I am told, 3,000 carats. It was sold in Bahia and sent off to Europe. Another, discovered more recently, weighed 975 carats. It was sold in Paris for 1,000 francs. These large stones have, however, to be broken; this always involves great loss, as they have no line of fracture, so that in proportion to weight the smaller carbons are more valuable.

Mining for diamonds and carbons is like gambling. Sometimes many bushels of gravel are washed over before a stone is found, and often a man may wash for a whole season and not find more than two or three. The washing is chiefly done by negroes, who use wooden bowls, looking the gravel carefully over as they wash it. The divers usually work naked, although one American proprietor has recently imported diving suits for his men. In some places the diamonds are found in the gravel near the river and are washed down by hydraulic means.

We think of Brazil more as a land of coffee and rubber than of gold, silver, or iron. Parts of the country are full of metals. The State of Bahia, where I now am, has gold mines, and there are rich mines of manganese near here awaiting some one to develop them. In Minas Geraes there is a gold mine which has been worked for more than fifty years. There are also rich gold-



WASHING FOR DIAMONDS, BRAZIL

diggings in Matto Grosso, and gold-washing goes on along many of the tributaries of the Amazon.

Out of the Ouro de Morro de Fogo mines at Minas Geraes, about 20,000 pounds of gold were taken before Brazilian independence was proclaimed, and there is reason to believe that there is a vast amount left. The mines have never been sunk more than 75 feet on account of the water; this could easily be pumped out, and, if done, would probably result in much profit.

The gold mine I spoke of as having been worked for fifty years is the Morro Velho, which is now annually producing 5,000 ounces of gold. It is one of the most important mines in Brazil and is managed after modern methods. It takes out about 200 tons of ore a day, using 100 California pistons. It has five great stamping mills, and it reduces the gold to bars on the spot where it is taken from the mines. The mines are far back in the country and the gold output is sent to the railroad on carts. There are no soldiers with it, and it is evidence of the safety of property in Brazil that, so far, none of the trains has been robbed. The gold-bars each weigh eight ounces troy; they contain about one-half per cent silver, and are each worth about \$3,000.

Of late considerable interest has arisen in regard to the gold mines north of the Amazon. In the corner of Brazil next to French Guiana, there is a territory which is said to be rich in gold. About \$2,000,000 worth was taken out of the mines in one year, and at present there are many Frenchmen mining gold in that section. The country is a wilderness, without any government but that of the gun and the revolver. The climate, moreover, is bad, and those who go there often suffer from fever.

CHAPTER LVI

UP THE COAST OF BRAZIL

PECULIAR FEATURES OF LIFE ON A BRAZILIAN STEAMER—THE CITY OF PER-
NAMBUCO AND ITS 'WONDERFUL REEF'—A GREAT COTTON COUNTRY—
BRAZIL'S NEW COTTON FACTORIES, AND THEIR ENORMOUS PROFITS—A
VISIT TO CEARÁ AND ITS CAPITAL, FORTALEZA—TERRIBLE FAMINES—
THE CARNAUBA PALM, WHICH HOUSES, FEEDS, AND LIGHTS THE PEOPLE.



AM on the steamship *Manaos* approaching the city of Pará, at the mouth of the Amazon. Twelve days ago I left Bahia, and since then have been travelling along the coast. The *Manaos* is one of the Lloyd Brazilian steamship line which has the monopoly of the coast trade of Brazil. It has steamers on the chief rivers, and its principal ships ply regularly between Rio de Janeiro and Manaus, a thousand miles up the Amazon. The distance from Rio to the Amazon's mouth is 2,900 miles, so that it is almost as far from the capital of Brazil to the Amazon as it is from the mouth of the Amazon to New York.

The *Manaos* was built in England. It is a steamer of about 3,000 tons, and has all the modern improvements. It has incandescent electric lights, its cabins are large, and the dining-room is finished in marble and gold. It has a bath-room, which appears to be used by no one but myself, but which supplied by the warm salt waters of the equatorial seas is delightful. This is the rosy side of a picture which has its dark side as well. A part of the latter is our passengers. Those who travel on the regular steamers have no idea of the human beings who swarm in the coasting-vessels of the country. My companions are of all colours and conditions of men. Let me begin at the top deck; this is filled with emigrants, who are on their way to work in the rubber forests of the Amazon. There are at least 1,000 of them, all more or less coloured. Most of the men have their families with them, and there are at least 50 babies and many small chil-

dren. The babies, in most cases, are stark-naked, as are all the children under four years of age. The nude little ones sprawl over the deck in all sorts of attitudes. They play games, now and then wrestling together. One four-year-old boy plays horse, riding a knotty stick between his naked legs. As he trotted over the deck yesterday another naked boy saw the horse and coveted it. He grabbed it and there was straightway a fight, which ended in both children being captured by their parents and carried squalling to opposite sides of the ship.



A BRAZILIAN OX-CART

On the lower gangway, where everyone has to pass, a woman has slung her hammock. She lies most of the time stretched out in it, with a baby about a week old in her arms. Yesterday afternoon as I went by she was giving the infant a bath. She had placed a large gourd on the deck, stood the little one in it, and was pouring the water over it and scrubbing it vigorously. The baby cried lustily, looking, in its nakedness, the personification of grief.

Speaking of hammocks, they are swung everywhere on the decks of the ship. They are tied to the rigging, one above the other, like the bunks in an Atlantic liner. Every hammock has two or three persons in it; sometimes it contains a man and



A PERNAMBUCO NEGRO

his wife, sometimes a mother and her children. The poorest of the deck passengers sleep on the floor. They have no seats, and men, women, and children sprawl about the decks in all sorts of positions, both by day and by night. They eat on the deck,



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squatting at their meals more like animals than men. Each family has a round tin bowl, the size of a sieve; this is filled with a mixture of rice, mandioca, and meat. As a general thing they eat with their fingers, although sometimes a family has one or two spoons and a knife and fork.

And what do we first-class passengers eat and how do we eat it? Well, we have plenty of food, and if the marble and gold walls of the dining-room *salon* could make it delicious, there would be no lack of appetite. I am, however, something of an old maid in my tastes. Perhaps I am becoming a snob; I don't know. At any rate, I cannot get used to the table-ways of the middle-class Brazilians. It disturbs me when the negro lady who sits beside me at dinner goes fishing in the mixed-pickle bottle for little onions, with the fork she has just been using, and having caught several and eaten them, passes the bottle across the table to her fat Brazilian grandma, who acts in the same way.

As to the meals themselves, we have four a day. The first, at 6 A. M., consists of tea or coffee and a cracker. At 9.30 there is breakfast, which is much like dinner in the number of its courses, and at 4.30 comes the dinner proper. At 8 o'clock tea is served. The breakfast begins with a soup, then follows fish or meat-fritters, after which braised beef and vegetables. There is always a bowl of farina or roasted mandioca flour on the table. This is sprinkled over the meat by the guests. The Brazilians like it, but to me it tastes like sawdust. There is also a mixture of dried beef and black beans, cooked in a stew, and tongue served in different ways. The dessert is usually guava jelly, Edam cheese, oranges, and bananas. The dinner bill is about the same as that of the mid-day breakfast, the courses being almost entirely of meats.

After leaving Bahia we stopped at several coast towns before we came to Pernambuco, or as I should say Recife. Pernambuco is the name of the State, of which Recife is the capital and principal port; but foreigners have so mixed up city and state that they call both Pernambuco, and Recife often bears the name Pernambuco on our maps. The word "Recife" means reef, the city getting its name from a wonderful reef which here runs from the shore a distance of several miles out into the sea, enclosing a body of deep water half a mile wide and several miles long, forming an excellent harbour.

The reef is a wall of natural rock rising almost straight up out of the ocean, on the top of which a low wall of stone has been built, so that at ebb tide there is from ten to twenty feet of it above water. At high tide the wall is still large enough to keep out the sea, which dashes itself against it in vain. I shall never forget my ride into the harbour. There was a heavy swell and the waves gnashed their teeth as they threw themselves against the stones, spitting out, as it seemed, masses of snow-white foam in their anger. The spray was thrown thirty feet into the air. It fell over into the quiet waters of the harbour; and as we lay there and looked at it, the sun came out from behind a cloud and made countless rainbows with every wave. It was in fact a geyser, two miles long, spouting up foam of all colours, shades, and tints.

Recife is one of the busiest ports in Brazil. It has about 200,000 inhabitants. It lies right on the sea, being ~~so~~ cut up by the arms of the ocean that its people call it the South American Venice. It is a busy port, about 1,000 ships coming to it every year. It is the first place at which the steamers stop on their way to South America from Europe, and it has a vast trade, especially in cotton and in sugar.

The State of Pernambuco is about as large as New York. It is a cotton State, the cotton being raised on small plantations, few farmers growing more than two or three bales annually. Still the output collectively is large. The lands are cultivated chiefly with the axe, the bowie knife, and the hoe. The trees are first cut down and burned, to clear the land. Then holes are dug and the cotton seeds planted. After this little more is done save to keep down the weeds until the cotton is ready for picking. There is no ploughing or farming in our sense of the term. Lands are cheap, and I do not doubt that cotton-growing, if conducted on modern methods, would pay.

It is curious to see the cotton as it is brought here to the warehouses. Much of it comes upon the backs of horses, two 200-pound bales being slung to the sides of the saddle. Much is brought in on ox-carts and some on low waggons. The cotton is bound with rough sacking. It is often tied up with vines, being repacked after it reaches the seaports. It is interesting to watch the loading and unloading at the presses. The negroes

carry the bales on their heads, often taking two or three hundred pounds for a block or more in this way.

I am surprised at the increase in cotton-planting in Brazil. The amount raised is steadily growing, and the day may come when cotton will be king here as it is in our Southern States. It is raised north of Rio de Janeiro all along the coast to some distance above Pernambuco, and I have seen it loaded at nearly all the ports. The government has now a tariff on cotton goods, which enables the Brazilian cotton mills to make money. Within the past ten years 155 cotton factories have been established, and most of these are paying considerable dividends. One factory paid 60 per cent the first year, and 10 per cent a year for five years thereafter, at the same time greatly enlarging its plant. In the State of Alagoas, below Pernambuco, there is a mill which produces 125,000 pieces of cloth per annum. It gives employment to 480 workmen. The first year it was established it paid a dividend of 48 per cent. The second year it paid 50 per cent and the third year 40 per cent. In the State of Bahia there are 15 cotton mills; there is also one at Rio, and they are to be found as far south as São Paulo. The southern mills get most of their cotton by ships from the north. In the State of Minas Geraes 46 factories are now in operation, 200,000 workmen are employed, and thousands of tons of cotton are annually consumed. I am told that these factories have something like \$150,000 capital. There is a single manufacturing company in Bahia which has \$1,000,000 capital; it operates six mills, running 440 looms and 21,000 spindles; and produces about 58,000,000 yards of cotton cloth annually. One of the big factories of Rio de Janeiro imports its thread; it belongs to an Italian company and is doing well.

Wages are much lower here than in the cotton factories at the North. They range from 20 cts. to \$1 per day. There are no strikes, and the hours are long. Many of the factories make goods only to order, weaving the mark and the name of the merchant in the goods. Most of the cotton manufactured is cheap. The width which the people of the interior prefer is 26 inches, but the higher grades are made in 24, 32, and 36-inch widths.

This is also a sugar country. Pernambuco produces about 100,000,000 pounds of cane-sugar a year. It has large sugar

factories and many in which the sugar is made into the native rum, for which there is an active demand.

Recife is an interesting place. Its buildings are of bright colours, those of the business section being of two and three stories. Many of them have walls of porcelain tiles, and some have ridge roofs that recall the houses of Holland. The town was once inhabited by the Dutch, but the Portuguese drove the Dutch out, and long ago the city became entirely Brazilian. Its people pride themselves on being among the most enterprising in Brazil. The town is equipped with newspapers, a public



STREET IN PERNAMBUCO, BRAZIL

library, telephones, electric lights, street-cars, and public schools. It has several colleges, a gymnasium, and a geographical institute.

The street-cars are hauled by mules. The fare is only one-half of our money, and even at this rate the lines pay. Everyone patronizes the cars, whites, blacks, and yellows sitting side by side, as they do everywhere in Brazil. I recently rode down town with a black girl of fifteen beside me. I thought she was a servant, until I saw in her lap some books which showed me

that she must be a teacher, or possibly a pupil in the high school. One book was La Fontaine's 'Fables' in French, another was an algebra, and the third a geography in Portuguese.

During my stay I visited the market. It is as fine as that of any American city, and meats are sold very cheaply. I saw excellent beefsteaks offered at eight cents a pound, and mutton at similar rates. Speaking of mutton, they have very good sheep and goats in this part of the world. The goats are raised for their skins, which are shipped in great quantities to the United States to be made into shoes. Hides are also exported. One variety of sheep is used by the children for riding, and it is a common thing in the country for each child to have its riding sheep. The wool makes a soft seat, and the little ones gallop about without danger of being much hurt when they fall.

The next long stop after leaving Pernambuco was at Fortaleza, a town of about 50,000, the capital of the State of Ceará. Ceará is as large as Ohio; it is situated about 200 miles south of the equator, just below the Amazonian forests and at the beginning of the highlands of Brazil. It consists largely of mountains and high plains. Some of its peaks are from 3,000 to 6,000 feet high, and its more elevated lands are at times as dry and bare as Sahara. It is a land of frequent famines and droughts, and many thousands of its people die from such causes.

The city of Fortaleza is not unlike those of central and southern Brazil. It has the same one-story houses, built close to the streets, the same open windows, out of which girls and women are hanging and gazing at the passers-by, and the same naked babies who sprawl about in all conditions of dirtiness. In this hot region few of the children up to the age of four wear clothes. It is so hot at midday that you feel it would be a pleasure if you could "get out of your skin and sit in your bones."

Ceará is noted for its beautiful lace, its talking parrots, and the carnauba palm. The latter is one of the most valuable of trees, and can be used for more things perhaps than any other. It houses, feeds, and lights the people. Its roots, when made into a tea, will clear your blood like sarsaparilla. Its trunk can be used for building material, or when ground up can be made into paper or cloth. The palmetto of the carnauba is eaten as a vegetable. From it wine and vinegar are extracted, and out of

it comes a saccharine substance as well as a sago which is very nutritious. In times of famine the carnauba forms a large part of the food of the people; its fruit is used for feeding cattle, and its nuts, which are rather oily, make a good substitute for coffee. The stem has a pith which can be used for cork, and of its wood musical instruments, pumps, and tubes are made. Out of the stem also comes a white liquid or sap, much like the milk of the cocoanut, and when ground it forms a flour somewhat like maize. Of the straw on the stem, hats, baskets, brooms, and mats are made. In addition to these things the leaves of the carnauba furnish a wax, which makes excellent candles. This wax is sold in the markets of Forteleza and much of it is shipped abroad. Some years ago the export of carnauba wax from Ceará amounted to more than 3,000,000 pounds yearly, while the home consumption was estimated at almost 2,000,000 pounds. These figures I take from the reports of one of our consuls.




VENUS OF THE UPPER ANDEAN AMAZON

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CHAPTER LVII
ON THE MIGHTY AMAZON

TRAVELLING ON AN OCEAN STEAMER UP THE GREATEST VALLEY IN THE WORLD
—THE WONDERFUL SIZE OF THE AMAZON—ITS MANY TRIBUTARIES AND
ITS FLOATING ISLANDS—STEAMING THROUGH THE DELTA—HOW THE
RIVER LOOKS A THOUSAND MILES FROM THE SEA—SKETCHES OF THE
PEOPLE AND THEIR HOMES—THE FLOODS IN THE AMAZON BASIN,
THE RAINIEST PART OF THE WORLD—THE CACAO PLANTATION, AND HOW
CHOCOLATE IS RAISED.

FLOAT upon the mighty Amazon; steaming up the greatest river in the world; riding on and on over a yellow inland sea, now coasting shores lined with tropical vegetation, and now so far out that one bank is only a hazy line of blue as seen from the other. I am on an ocean steamer 800 miles from the Atlantic, in the greatest river valley in the world. I entered the Amazon on the south side of the island of Marajo and stopped some time at the city of Pará, the metropolis of the region, which I shall describe farther on. I am now on my way up the river, and at the present moment am within half a mile of its southern bank.

The shores are lined with cacao orchards, and with my glass I can see the golden fruit from which our chocolate comes, shining out from among the green leaves. Back of the orchards are the lofty trees of the mighty Amazon forests, and close to the shore are the gray thatched huts of the people. The opposite bank is wooded, but it is so far away that it forms only a line of soft dark blue which fades into the lighter blue of the sky.

In front of and behind the steamer stretches the mighty stream, carrying the waters of the northern and central Andes down to the sea. It has in it the washings of more than half a continent; it is the down-spout of a watershed half as large as the whole United States. With it are mixed particles from the sluice-boxes of the gold mines of the Beni and the Marañon. Parts of its

waters have received bitter kisses from the quinine trees of Peru, while other parts have trickled from the soil of Ecuador. It embraces the drainings of the sacred cities of the Incas, and it may contain some of the washings of the diamond mines of upper Brazil. It has passed through countries inhabited by cannibals; it has come from wilds where the foot of the white man has never trod; from mountains and valleys and lofty plateaus; and is now on its way across the continent to its great mother, the ocean.

As I entered the river I coasted along the south side of the island of Marajo, which lies at the mouth; and then wound in and out through the narrows, a series of wonderful channels, which brought me into the main stream. I first sailed through the Pará river out of the Amazon's mouth. Farther on, I crossed the mouth of the Tocantins, up which you can steam for days into the wilds of Brazil. To-morrow I shall go past the mouth of the Madeira, and I have already crossed the mouths of other tributaries, a number of which are as large as some of the so-called great rivers of the world.

The Amazon system is unquestionably the greatest river system of the globe. It has 1,100 branches and receives into itself more than 100 rivers. It has eight tributaries, each of which has a navigable length of 1,000 miles. The Amazon proper is navigable for large steamers as far up as Manáos, which is at the mouth of the Rio Negro, and as far inland from the ocean as Chicago. There are smaller steamers which go 1,350 miles farther on to Iquitos, Peru, so that you steam up the Amazon in an almost straight line 2,350 miles westward from the sea.

There are steamers on the Rio Negro that sail to the north-westward 470 miles from Manáos. You can get steamships on the Madeira that will take you to the borders of Bolivia, and, indeed, there are, all told, 5,000 miles of steamship navigation on the Amazon and its branches, while the whole river system is estimated as having something like 50,000 miles of navigable waterways. The whole valley is covered with a network of rivers and streams, and it is not until you realize its size that you can appreciate the extent of the system.

There is no valley in the world like that of the Amazon. It is 700 miles wide and 2,400 miles long. It is as wide as from New York to Cleveland, and is longer than from Philadelphia to Great Salt Lake. It is more like a sloping plain than a valley.

It has not the high walls of other valleys, and its slopes to the north and south are so gradual that by one short canal the water systems of all South America could be connected. The Paraná and Paraguay system runs almost to the Amazon. You can go



INDIAN AMAZONAS IN BARK CLOTHING

up the Paraguay and its tributaries, and by carrying your canoe a few miles can launch it on the tributaries of the Amazon and float down to the Atlantic. The waters of the Amazon and those of the Orinoco, which flow into the Atlantic at the northern

part of South America, are actually united by the Cassiquiare river, so that with a short canal connecting with the Paraguay one could really sail from the edge of the Caribbean sea to the mouth of the Rio de la Plata.

The slope of the valley from the Andes to the sea is very slight. Its fall in 2,000 miles is only 200 feet, or just about an inch to the mile. You would hardly think that the water would flow at all with so slight a fall, but it does flow, and it carries with it vast quantities of silt. Millions of tons of mud are taken down by it every day into the Atlantic. Tree trunks and bits of vegetation which grow only in the Peruvian Andes have been seen floating in the ocean 400 miles east of the mouth of the Amazon, and the waters are said to be stained quite 600 miles from its mouth.

Here the colour of the river is yellow. It is about as thick as pea-soup, and I can see not only trees and grass floating by, but great beds of vegetation, floating islands, which have been torn from the uplands, and are being carried down to the sea. Some of these islands are as large as an acre in size. They rise and fall in waves as our steamer goes by. Now and then they are caught by snags near the shore and held there for the floods or heavy winds to carry them off.

The greater part of the Amazon valley is made by the mud brought down by the river. Geologists say that there was originally a wide strait here joining the Atlantic and Pacific oceans. South America then consisted of two divisions, the highlands of Venezuela and the Guianas on the north, and the great island of Brazil on the south. Then the Andes were thrown up out of the sea on the west. The bottom of the Amazon valley was raised, the waters of the ocean rolled back, and this great Amazon plain was formed. During the centuries since then the waters have been rolling down through it to the Atlantic, loaded with mud. The city of Pará stands on land made of this mud, and from it the great island of Marajo has been built up. Every year there are floods which turn this region into a vast inland sea. When the water subsides quantities of mud have been left, and thus year by year the delta of the Amazon has been formed.

The waterways of the delta are more wonderful than those of Holland. I saw something of them when I left the island of Marajo and sailed into the main body of the Amazon. The land



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there is cut up by natural canals, forming vast islands of curious shapes separated by narrow streams of water, walled with tropical vegetation. I have seen most of the great rivers of the world, but nowhere else have I seen anything like this. Let me give you some notes I made while sitting in the prow of the steamer as we passed through.

We are now in the great delta of the Amazon. We have left the rushing channel where the river rolls along in yellow waves on its turbid course, and are floating through canals, the waters of which are as smooth as burnished steel, but which the setting sun has changed to copper and to gold. On all sides are islands, floating as it were on a copper sea, masses of rich, dark navy blue and gorgeous green. Our steamer is passing between walls of emerald plush 100 feet high, which cut by other canals, similarly wooded, make it seem as though we were travelling through one of nature's great cities. It is a fairy city of the Amazon—a city not built with hands, a city populated by monkeys, jaguars, parrots, and butterflies. It is the haunt of the crocodile, which here grows to its greatest size. It is the home of the orchid and the palm, of the India rubber tree, and of countless other tropical plants, each of which would be a rarity in the botanical gardens of Europe.

Take a look at the trees; what a variety of palms! Some of them are only as big around as your arm, but they are as tall as a six-story house, extending from the ground to the top without branches, and ending in a waving tassel of leaves. There are others that sprout out in great bunches from the ground—palms loaded with cocoanuts, each nut in its green husk as large as a foot-ball. There are palms that branch out like fans, and there are royal palms 100 feet tall, that tower high above the smaller varieties. But the most striking trees of the Amazon are not the palm trees. We look in vain for a forest of palms. Palms grow among the other trees of the woods, and you seldom see many palms close together. The other forest trees in the distance look much like our trees at home. When you get close to the shore, however, you see that the trees are matted with vines. The bark of many of them is silver gray, and long creepers hang down from their branches to the ground, so that it would be almost impossible to make your way through without the aid of an axe.

Some of the trees are enormous. The one that bears the Brazil nut towers high above all others. It has a foliage of rich dark green, and this extends out in the shape of a great hill or mound of green away up there in the air. The Brazil nuts are like walnuts, only each nut is about twice the size of a base-ball. It has a thick husk over it, and inside of it there are from 15 to 20 of the Brazil nuts of commerce.

Some of the Amazon trees are covered with flowers. Over there at the right there is a haystack of violets poised up on the top of a huge trunk, sixty feet high. Farther over you may see a tree with blossoms like buttercups. Image in the eye of your mind a stack of buttercups as large as a circus tent, away up in the air, surrounded by green, and you have the effect. The most beautiful things, however, are the little things, the orchids that cling to the dead branches, the fern trees, and plants, that have leaves dusted with silver and copper and gold.

I saw but few people on my way up the Amazon. Along the banks, here and there, cut out of the woods, is a clearing just big enough for a hut and a garden. The hut is made of poles and palm leaves, and the garden consists of a few banana plants an orange tree or so, and some palm trees. The huts are so rude that the wind whistles through them, and the roofs merely serve to keep out the rain and the sun. They are built close to the edge of the river. Naked babies play on the shores in front of them, and barefooted men and women, many of whom are mulattoes or negroes, stand and look at our steamer as it goes by. Most of these people are rubber-seekers, a few own cacao orchards, but all seem to be thriftless and poverty-stricken.

Many of the people can live in their huts only a part of the year. During the floods they have to go to the higher lands, for the Amazon valley is the rainiest region in the world. It is estimated that 1,500,000 cubic feet of rain falls upon it every day the year through. This is an average of 72 inches of rain per annum. In other words, if the water lay where it fell the whole valley would be covered with rain so deep that it would drown the average man. In many parts of the valley it rains every day. In Pará I had to make my appointments to call after the usual afternoon shower, and here farther up the Amazon the air is full of moisture and mist. Everything is rusty; even my knife has rusted in my pocket. I have to keep my

revolver well oiled, and if I leave my gun loaded over night it is sometimes so damp that it will not go off in the morning. My camera is freckled with rust, and my typewriter looks as though it came from a junk-shop.

The greatest rains are in our winter. In November and February the Amazon rises from 30 to 50 feet above its usual level. At this season a vast part of the valley is flooded, and thousands of square miles are covered with water for months. Many of the islands are submerged. The water flows out and in among the tops of the trees, and the valley for 1,000 miles and more is



AMAZONAS AND ALLIGATOR

a vast inland sea from 15 to 100 miles wide. As you go up the river, you see here and there long stretches of meadows which are made by these floods. The trees will not grow upon the lands where the waters lie for months; the result is the pasture-fields of the Amazon, which are vast in extent. There are also many cattle, and I am told that thousands are pastured on the island of Marajo.

The people of the Amazon rely entirely upon boats for getting about. Every hut we have passed has had two or three boats tied to its wharf. Some are dug-out canoes, others are

flatboats, and at one or two large houses we saw steam launches. Some of the row boats are painted in bright colours, and not a few have canopies or covers over them, under which their owners can climb to keep out of the sun.

As we passed the huts the people usually ran out and dragged the boats up on the banks. Sometimes they jumped into the boats and rowed them out from the land to prevent the waves



BOAT ON THE AMAZON

made by the steamer from overturning them and filling them with water.

There are no roads in these Amazon forests. The only paths are those that go from one rubber tree to another. These are too rough and winding for the people to use in the way of travel, and they lead to no particular place. The only roads are the streams, and the people go visiting in boats. They carry their cacao and rubber to market in boats, relying entirely upon this method of getting from place to place.

There are few villages along the banks of the river. We passed the towns of Santarem and Porto Alegre without stopping, but anchored for a time at Obidos, one of the well-known ports of the Amazon. It is about 500 miles from the sea, at the narrowest part of the channel. The river bed there is only a little more than a mile wide, so that the immense body of the Amazon rushes through with great force, having cut out a channel 240 feet deep. The current is so strong that anchors alone will not hold the steamers, and our ship was fastened by cables to the trees on the banks.

Obidos has been represented as having more than 1,000 inhabitants; I doubt, however, whether an accurate census would give it 500. It is merely a collection of little one-story houses cut out of the woods, with a few stores and a billiard saloon. During my stay it was exceedingly hot, and the place was dreary in the extreme.

Above Obidos are many orchards of cacao trees; they line the Amazon for miles. The trees look much like lilac bushes; they are from 15 to 30 feet in height, and branch up in sprouts from the bottom. They are gnarly, and the leaves and fruit sprout directly from the limbs. The fruit, when ripe, is of an orange hue, streaked with red; it is the shape of a squash or a very large lemon; it has a thick shell, and inside there are many seeds enveloped in a soft pulp. The seeds are the cacao beans of commerce. They have black hearts full of oil. When ground the hearts make the chocolate, and the shells of the seeds form what we call cocoa.

The orchards as a rule are poorly cared for. Most of them are old, and although there is plenty of ground for new trees very few are planted. Still the business pays well. The trees begin to yield fruit three years after they are set out, and it is said they will continue to bear for fifty years. Two crops a year are gathered, and the only cultivation necessary is to keep down the weeds. The chocolate of the Amazon is excellent, the French preferring it to all others. About 5,000 tons are raised annually, and the yearly exports from Pará alone often amount to more than 7,000,000 pounds.

CHAPTER LVIII

THE GREAT CITIES OF THE AMAZON

SOME FEATURES OF PARÁ AND MANÁOS, WHICH CONTROL THE TRADE OF THE VALLEY—HIGH AND LOW LIFE AT THE AMAZON'S MOUTH—MANÁOS, THE METROPOLIS OF THE RIO NEGRO—AN OCEAN PORT A THOUSAND MILES FROM THE ATLANTIC—A TOWN OF ELECTRIC RAILROADS, TELEPHONES, AND CHARITABLE INSTITUTIONS—IQUITOS, ON THE PERUVIAN AMAZON, A STEAMSHIP PORT 2,300 MILES INLAND.

THE great cities of the Amazon valley! It seems odd to think of the savage Amazon having cities at all, but it is really a trade centre, annually exporting products worth many millions of dollars. The biggest city on it is Pará, which lies at its mouth, 1,000 miles east of Manáos where this chapter is written.

Pará now has a population of 100,000, and it is growing as fast as the dense vegetation by which it is surrounded. It is a modern city, with electric lights, telephones, and street-cars. It has a large theatre, two second-class hotels, and an amount of vice that would shock our modern reformers. It has numerous cafés, in which string-bands with women-performers nightly act, and on the main street in the heart of the city is a building known as the "High-Life Hotel" which is devoted to life of the lowest order. This hotel, as pronounced by the Portuguese, is called the "Higgy-Liffey," for that is the way the Portuguese pronounce high-life.

Notwithstanding this wickedness, I rather liked Pará. It has a very respectable club, the members of which give dances twice a week and to which the families of the better class come. It has fine residence streets, a number of beautiful parks, and were it not for the fear of yellow fever, which always hangs over it, life in it would not be so unendurable. As it is, nearly every foreigner is in constant dread of the fever, and many of the business men carry bottles of castor oil about in their pockets and



WHARF AT MANAÓS, 1,000 MILES UP THE AMAZON.

drink a tumblerful at the slightest headache or intimation of indigestion. This is, I am told, the best remedy for immediate use in case of a yellow-fever attack.

But let me tell you how Pará looks. As you see it from the river it is a low white city with red and other bright-coloured buildings rising out of the white. A row of palm trees lines the shore, and behind them are the huge wood and corrugated iron warehouses from which the Pará rubber is shipped to all parts



GENERAL STORE AT PARA

of the world. You see this through a thicket of masts, for the Amazon is here filled with shipping. There are big ocean steamers from Europe and the United States; there are iron lighters shaped much like the whaleback boats of the lakes; there are scores of miscellaneous sailing-vessels and hundreds of dug-out canoes, with dark-faced boatmen paddling them to and fro.

On landing you find yourself in one of the busiest of South American ports. Negroes and mulattoes are loading and unloading the ships; they are carrying on board great boxes of rubber;

they are bearing boxes and bales on their heads to the shore. The crowd about the wharves is much the same as that on the docks of New Orleans. The people are of all shades of white, yellow, and black. There are swarthy negroes from Jamaica, yellow-skinned men from upper Brazil, sallow Portuguese, besides a sprinkling of all the nations of Europe.

The labouring people are in their bare feet, and most of them are bare-headed. The men wear cotton shirts and trousers, the latter upheld by waist-bands. The women dress in bright-coloured



MARKET ON WHARF AT PARA

calicoes. See that negro trotting along with a bale of sole leather on his head! Behind him is a woman with a great basket of mandioca carried in the same fashion, and farther back comes a mulatto with an enormous turtle balanced on his crown. The turtle is as big around as a wash-tub: it kicks out its legs, and agonizingly thrusts forth its head as it lies there on its back shading the man.

Here comes a cart, hauled by a pony. It looks as though it had a load of hams in it, and as it goes past us we are greeted by a



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FASHIONABLE RESIDENCE STREET IN PARA

smell like that of a smoke-house. Those are lumps of rubber on their way to the shipping-houses for sale. There are scores of rubber-houses near the wharves. Everyone is handling rubber, and the air smells as though there had been a recent fire and water had been dashed over it. Men are carrying rubber from the canoes to the warehouses. They are taking it in and out of the buildings. They are chopping it up and packing it into boxes and marking it for shipment to all parts of the world. Pará is the greatest of all rubber ports, and the chief business of the city is the supplying rubber camps with goods and selling the product.

But let us take a street-car and ride out through the residence section. Pará is one of the cleanest and best-built towns in Brazil. It has hundreds of houses of ventilated brick, covered with stucco, painted in all the colours of the rainbow. Some are frescoed and others are decorated with wreaths and figures in plaster. There are many houses faced with porcelain tiles, which have been brought here from Portugal. Some of the houses have balconies of wrought-iron, and many have wrought-iron work over their windows. They are well-furnished and make comfortable houses.

The city of Manáos is even more interesting than Pará. It is 1,000 miles inland, in the heart of the great Amazon forest. There are woods about it so dense that monkeys could travel 1,000 miles through them, jumping from branch to branch and never once touching the ground. They are so thick that you could not possibly go from one place to another except by the streams. It would take you a day with an axe to go five miles, the country about here being so very wild. It is, in fact, one of the least-known parts of the world, and Manáos, the metropolis, is the chief city of a region hundreds of thousands of square miles in extent.

Manáos is on the Rio Negro, about ten miles from where it flows into the Amazon. In coming up the Amazon, as we approached the Rio Negro I could see where the two rivers united, without lifting my eyes from the water. The Rio Negro is as black as one's hat; the Amazon is as yellow as pea-soup. For about two miles below the mouth of the Rio Negro the waters of the Rio Negro and the Amazon flow side by side without mingling. Our steamer for a time cut the joining of the waters,

so that on one side of the ship the stream was as tawny as a lion's mane, while on the other it had the panther black of the Rio Negro. A little below this the two colours disappeared, the waters of the Rio Negro having been swallowed up in the mighty flood of the Amazon.

As we steamed on we passed out of the Amazon into the wide mouth of the Rio Negro. We were now sailing through a jet black stream: our steamer churned the water into foam and



THE THEATRE, PARA

it looked like boiling black molasses. A sailor dropped a bucket over the side, and caught up a gallon for me to examine; in the bucket it looked brown, but when I took it up in a glass it seemed almost clear.

The Rio Negro is an immense stream. It is very wide at its mouth, and at first sight it seems almost as large as the Amazon itself. It drains a vast region, and, as I have said, is so connected with the Orinoco by the Cassiquiare river that you can enter the Orinoco at its mouth and sail down through it to the

Rio Negro and the Amazon. As it nears the Amazon, the Rio Negro increases in size. A large part of its lower course is a succession of lakes, some of which are from 20 to 30 miles wide. Its flow is not very rapid, and its ordinary depth is from 100 to 150 feet. It has numerous sand-bars, which hinder navigation at low water, but during the rainy season it rises 30 or 40 feet and floods a large part of its basin. At its mouth there are high bluffs lining the banks; these are dotted with cacao plantations, back of which are dense forests. There are numerous palm trees, and among them now and then a thatched hut upon piles.

A little farther on, upon a hill on the north bank, is the city of Manáos. The town slopes up from the river, covering the hills at the back, and from the steamer it looks like a large city. At first you see only a maze of white-coloured one- and two-story buildings, roofed with red-brick tiles. As you come closer, the houses near the wharves grow under your eyes until you realize that they are large business establishments. You see many fine buildings, and out of the mass notice a structure somewhat like the Pension Building at Washington, which is topped with a great dome, covered with porcelain tiles. That is the theatre of Manáos. It will seat 2,000 people, and it is finer than many of the so-called good theatres of the United States. The theatre is partially supported by the government, and troupes are brought here from Pará and other Brazilian ports. It is not a one-night stand, for it takes 2,000 miles to get to and from it, so that the troupes usually stay a week or more. With us came an American circus, which has a guarantee from the government for entertaining the people for a month in Manáos.

Manáos is an ocean port 1,000 miles inland from the Atlantic. Suppose that a big Atlantic liner could sail across the United States to Chicago, and you have about the situation of Manáos in respect to the sea. The steamer I came on drew sixteen feet; it was an English ship which had come from New York to Pará, thence to Manáos; its time from New York to Manáos is about two weeks; I asked as to the fare and was told that it was \$90 in gold.

There are steamers here from Lisbon, Liverpool, and Hamburg. There are two lines of ships from New York, and there are small steamers which go in seven days from here to Iquitos, Peru. Iquitos is about 1,300 miles west of Manáos. It is a

large town, and is a great port for rubber. The fare to Iquitos is \$30, and the time consumed in the passage is seven days; so that in three weeks, if you make the proper connections, you can go from New York more than 2,000 miles up the Amazon by steamer.

There are also vessels here which go up the Rio Negro, the Rio Branco, and the Madeira, so that you can readily reach any part of the upper Amazon region. Among the leading steamship companies is the Amazon Steam Navigation Company, which was founded by English capitalists in 1853. Its steamers are of about 500 tons and were built in England for this trade. There are 29 of them, and they cover altogether about half-a-million miles of travel every year. In addition to these there is the Brazilian line, which has 12 steamers, aggregating about 13,000 of a total tonnage.


The population of Manáos is about 50,000, composed of Portuguese and Brazilians, with a few English, Germans, and Americans. The chief business of the town is as a supply-point for the rubber camps farther up the Amazon valley. It has many large stores, whose stock-values run into the hundreds of thousands of dollars. The merchants furnish goods to the rubber camps and take rubber in return.

Manáos, notwithstanding its situation, has more modern improvements than most other cities in Brazil. Its streets are paved with cobblestones brought over 1,000 miles down the Amazon. It has a cathedral, a museum, a college, and an orphan asylum. It has electric lights and a telephone system, with 225 subscribers; and an American syndicate is already putting in an electric street-car line.

CHAPTER LIX

IN THE INDIA-RUBBER CAMPS

A VISIT TO THE RUBBER FORESTS, AND A DESCRIPTION OF HOW THE TREES ARE
TAPPED FOR THE MARKETS—HOW RUBBER IS MADE—WHO OWN THE
TREES—SOMETHING ABOUT THE RUBBER SLAVES OF THE UPPER AMAZON—
THE COST OF RUBBER, AND HOW I MADE AN OUNCE AT A COST OF \$100.

 HIS is the India-rubber age, and the Amazon is its main-spring. Down its turbid waters floats the elastic material that ties the world together. Amazon rubber is the best of all rubber; it furnishes the bulk of the product, and the nations of the earth pay tribute to Pará. The first rubber came from India, and hence the product was named India-rubber. Its value was discovered in 1736, less than 200 years ago, and for 80 years thereafter it was used only for rubbing out pencil marks. Then Mackintosh, in 1823, invented the rubber coat, and in 1843 the American Goodyear vulcanized it by treating it with sulphur. Other inventions followed, and to-day there is hardly an industry or an art in which it has not a part.

We all use rubber in some shape or other. We ride upon it in our carriages or cabs, it cushions the tires of our bicycles, and softens the seats of millions. We use it by tons to protect us from the rain. One New England factory makes 30,000 pairs of overshoes per day, and at a recent auction in Boston 4,000,000 rubbers were sold. Rubber ties together our papers; it upholds our trousers and stockings. There are, it is estimated, 20,000,000 men and boys in the United States who use elastic suspenders, and an equal number of the other sex who wear garters of the same material.

I am writing this chapter in Pará, the port whence most of the rubber product of the Amazon valley is shipped. The rubber territory extends all along the Amazon and its tributaries, comprising an area one-third the size of the United States. The best trees are on land which is flooded part of the year, and most

of them near the streams, the highways of travel. All the land is private property: it has been taken up by some one; the best of it is controlled by large companies, and much is owned in



RUBBER-TREE TAPPING, WITH HATCHET

big tracts. One company, The Amazonas, of London, for instance, owns 90,000 acres of forests; another, The English Rubber Company, has 182,000 acres, including 300,000 rubber trees; while a third, The American Rubber Trust, controls many camps.

Some of the companies have capitals of millions and all are managed after modern business methods.

There are also smaller companies and many individuals interested in rubber gathering and selling. Most of the proprietors live in Pará and Manáos; indeed, almost the whole territory is owned by these cities, the men and companies who actually do the work being in debt and subject to them. Some of the latter live in the wilds and use Indian labour. The Indians are sometimes practically enslaved, being compelled to work at the revolver's mouth. The question of labor is the most serious of problems in the rubber districts. The lowlands, where the rubber trees grow, are malarious and otherwise unhealthful. Many of the white workmen die, and it is only from fear of their masters that some of those of the Upper Amazon are kept at work.

It is rubber which has built up Pará, founding a great business city of 100,000 people here at the mouth of the Amazon. The people have grown rich by dealing in rubber and in supplying necessities to the camps. The State itself is prosperous through its export tax of 25 cents per pound on all rubber shipments, and it is from this tax that its officials wax fat.

You cannot be long in Pará without realizing that you are in the midst of rubber-shippers. The exporting parts of the city smell like a smoke-house. The odour is from the rubber, which is smoked in preparing it for market. It is brought in boats from the camps in lumps that look like small hams. They smell like country-smoked hams, and you think they are hams until you see one of them fall. It begins to bounce up and down as soon as it touches the ground, and rolls about as though it were a thing of life.

If you follow the rubber from the boats to the warehouses, you will see that each lump is carefully weighed, and that it is cut in pieces to ascertain that it is solid rubber all the way through, and it is then packed up in pine boxes for shipment. You may learn that each box contains 300 pounds and notice that the different boxes are marked for New York or Europe.

If you really wish to know, however, just what rubber is and how it is made, you must leave the cities and go into the forests of the rubber country and there watch the men as they gather it from the trees. This is what I did, making a piece of marketable rubber with my own hands. I can't say, however, that the

experiment was a financial success. The quantity of rubber I made was not over an ounce, and that ounce cost me \$100 in gold, or at the rate of \$1,600 per pound. It was, I venture to say, the dearest piece of rubber ever made.

The rubber district I visited was not far from Pará. It was on one of the islands of the delta of the Amazon. I had asked my friends to show me a camp at which I could make some rubber in order that I might describe just how it is done. So they hired a steam launch and fitted it out with provisions for a stay of two days. We had four sailors for a crew, and for the time lived very well. We failed, however, to fix the price of the launch beforehand, and when the bill was handed us the boat was charged for by the hour, the total sum amounting to 700,000 reis, or a little more than \$100 in gold!

We left Pará in the evening, and were all night steaming up the Amazon. Our hammocks were slung to the roof of the boat, and we lay in our pajamas out in the open. The air was delightfully soft and just cool enough for comfort. The moon was full and the equatorial heavens were dotted with stars. Early next morning we landed at the house of a rubber planter. Our host, a yellow-skinned man of about fifty, received us in his bare feet, giving us seats on his veranda and bringing us coffee and bread for breakfast. The house was right on the banks of the river. It was a rambling one-story structure, with a tiled roof surrounded by porches. At one end was the store-room, containing supplies for the rubber employés, and on the veranda were piles of rubber hams smoked and ready for market. After breakfast we walked about through the forest and watched the process of rubber-gathering and smoking.

But first let me tell you just how a rubber tree looks. Many of you have seen in hot houses the plants from which, as is popularly supposed, our rubber comes. In this, however, you are largely mistaken, for the rubber plant, with its thick, glossy green leaves, which you have seen, is that which produces gutta percha. It is nothing like the great tree from which we get the best rubber of commerce. The real rubber tree is not unlike many of our great forest trees. You might travel through the Amazon valley and unless you saw the rubber-hunters at work you would not know what it was. It looks much like the English ash, and grows to a height of more than 60 feet. Its bark, where it has

not become black by tapping, is silver gray. The trunk of the tree, when in full-bearing, is about as big around as a man's waist. Where it has been tapped, it often swells out at the base, so that it is much larger. It blossoms in August, being then covered with little white flowers. It is a nut tree, and in December and January, when the nuts are ripe, the shells which enclose them burst with a noise like a firecracker, throwing the nuts some distance. There are usually so many nuts on a tree that a man could gather enough in a day to plant 100 acres



GATHERING SAP FROM RUBBER TREE

of land. The trees can be easily grown in the rich soil, and they thrive without cultivation. It takes, however, from 15 to 20 years before they are ready for tapping. This is too long for the ordinary man to wait on the Amazon, and at present the trees that produce rubber are wild.

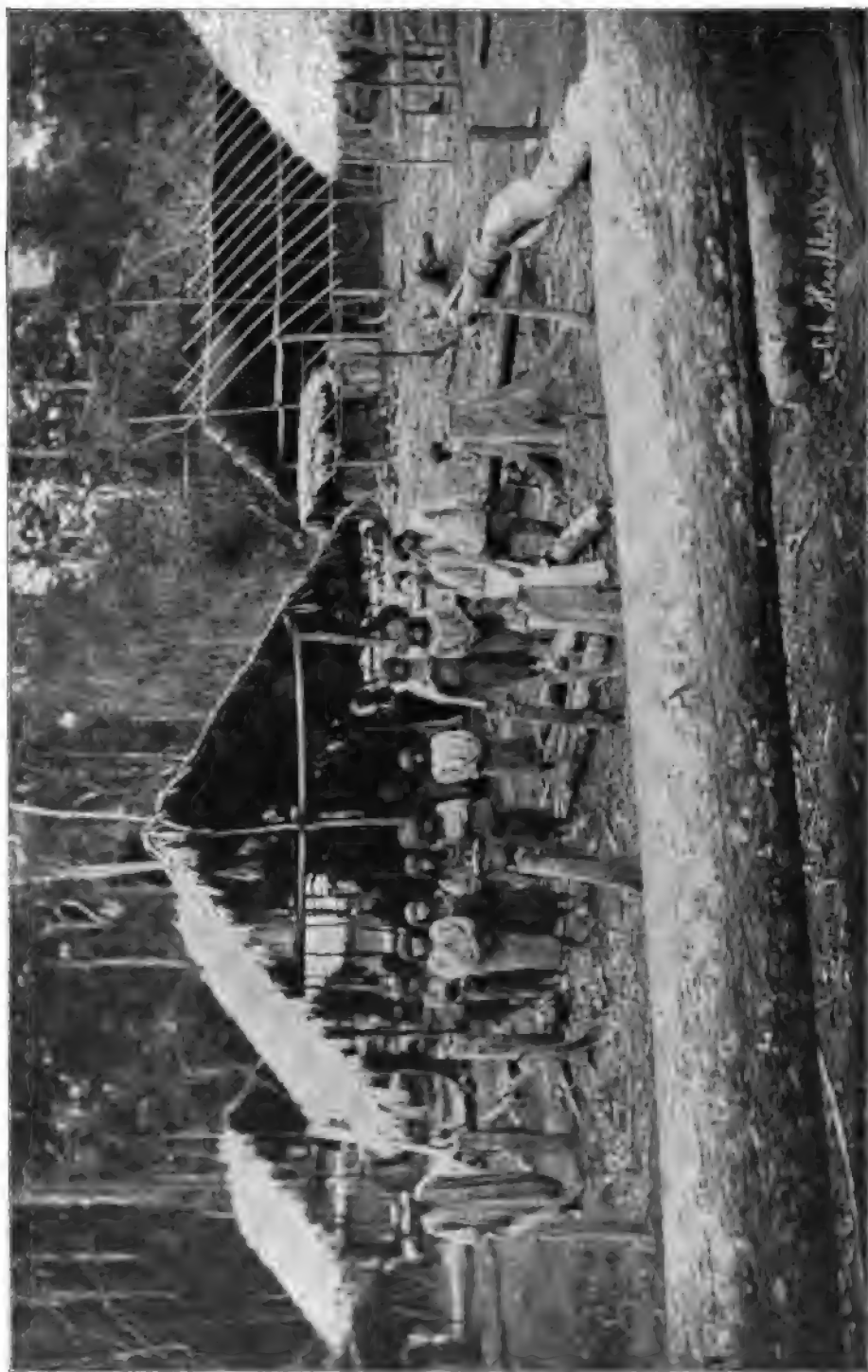
The rubber comes from the sap of the tree. The tapping is done from the ground up to as high as a man can reach, and sometimes higher. The trees are not bored with augers, as are our maple trees, nor are they scarred like the turpentine pine trees of our Southern States. The tapping is with a tomahawk or hatchet,

which has a blade an inch wide. The rubber-gatherer makes a slight gash in the bark with this hatchet, just deep enough to go through without cutting the wood. As he draws out the hatchet, a milk-white fluid oozes forth, as thin as milk. This is much like the juice of the milk-weed. The tapper now takes a little cup of tin or clay, about as big as an after-dinner coffee cup, and fits it into another cut which he makes below the gash, so that the drops of milk run down into it. He makes three or four similar gashes in each tree, fitting each with its cup, and then goes on to the next. He continues his work until every tree allotted to him has been tapped.

He does this early in the morning, when the sap flows most freely. By noon he has gone again from tree to tree and emptied the milk from the cups into a gourd-like bucket. Each cup will have a tablespoonful or so of milk; and if for his morning's work he gets a gallon of the fluid, he has done well. The milk flows slower and slower as the day advances. The air coagulates it, and after a few hours the sap has closed the wound.

A rubber tree that has been tapped looks like a mass of festering sores. The bark, which is of a smooth and beautiful silver gray where it has not been touched, becomes scarred and warty by the wounds of the hatchet. As the wounds close, tears of yellow rubber flow down on the bark about them. These tears are pulled out after the cup has been removed and sold as scrap or second-grade rubber, bringing from 20 to 50 per cent less than the rubber gathered in the cups, which can be properly cured. I almost neglected to say where the rubber trees grow in the forests. There is no such thing as a rubber-grove or a rubber-forest. The trees are not found in groups, but are scattered among the other trees, so that you often have to go long distances from rubber tree to rubber tree.

The forests are divided into paths, of from 60 to 100 rubber trees. These paths lead in and out of the woods, now crossing streams and now going through swamps, until all the trees on them have been reached. Each path is allotted to one man, who gashes the trees and gathers the rubber. The size of a plantation is known by its number of paths. There are some plantations that contain more than a thousand paths. It was along one of these paths that we went from tree to tree gathering rubber. I gashed one of the best-looking trees and fastened cups



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RUBBER-GATHERERS ON THE UPPER AMAZON

under the wounds. Later on I gashed others and in due time I gathered my rubber and brought it back to the house.

The next process is the smoking. To produce the best rubber the sap must be smoked the day it is gathered. It coagulates on



SMOKING THE RUBBER

exposure to the air, but hardens best under the influence of smoke. As directed by the rubber employés, I made a fire in the corner of a shed under a little clay chimney. The fuel was palm

nuts, which, when lighted, caused a dense smoke to pour forth. The chimney was just about as high as my knee; so high that I could easily hold the wooden paddle in the smoke and turn it round without difficulty.

Now the rubber sap which I had gathered was poured into a bowl, much like one used by a cook to knead bread. The sap looked just like milk, and was of about the same thickness. Into the bowl I thrust the end of the paddle. It came out coated with milk. I held it in the smoke, turning it rapidly, and in about a minute the rubber had hardened upon it. I then thrust



BALL OF RUBBER

it into the bowl again for a fresh coat of milk, hardened this in the smoke in the same way, and so went on until I had built up layer after layer of sap on my paddle.

The smoke of course came into my eyes, and I wept almost as many tears as there were drops of rubber sap in the bowl. Finally, having made a very small quantity, I handed the job over to the professionals. They continued the smoking for hours, and in the end had one of the rubber hams of commerce about the paddle. This was now cut open with a knife and the paddle taken out. From the cut part I could easily see the layers made

by the smoking. It looked much like cheese. In the smoking, the rubber had lost its beautiful white and become yellow and brown. It looked greasy, and was, as I have already said, of the shape and smell of a four-pound ham.


When we left for Pará we took about \$500 worth of these rubber hams with us. They were cut up and weighed at one of the warehouses, and by the time this account is published will, no doubt, have gone into the different forms into which rubber is used over the world.

I have made inquiries in various parts of the Amazon valley whether its rubber supply will soon be exhausted. Those best informed say that there is no reason for alarm. The trees are now scrupulously cared for, and every tree, if not abused, will produce milk in abundance for thirty or forty years. Rubber trees can be grown; already there are plans devised for rubber plantations, to be owned by large companies, and to be planted and cared for as long-time investments. It takes from 15 to 20 years after the planting before the trees will produce enough sap to pay for gathering it, but the cost of cultivation is small, and once in bearing the trees will continue to produce sap for many years.

CHAPTER LX

BRAZIL AND THE UNITED STATES

CHANCES FOR AMERICAN CAPITAL—THE BANKS, AND THEIR ENORMOUS PROFITS
—RAILROADS THAT PAY—COLD-STORAGE PLANTS—STEAMSHIP COMPANIES
THAT DISCRIMINATE AGAINST OUR TRADE.

URING my travels in Brazil, covering 8,000 miles, and including all the chief industrial centres, I have investigated the trade conditions and the chances for the investment of American capital. The country seems to me to be in the infancy of its development. It will some day support a hundred people where it now supports one; it will be one of the richest countries in the world and it will pay Uncle Sam to cultivate it and to insist that he get his rights in it as one of the great world-traders. Brazil has a territory almost as large as the United States, and one which includes more cultivable land. It contains more than half the people who live in South America; its population, moreover, is increasing, and it is steadily growing as a goods-consumer. At present, its exports are \$25,000,000 more than its imports, while its imports figure up the respectable sum of \$100,000,000 per annum.

The United States takes about half of all that Brazil has to sell. We buy most of her coffee, and tens of millions of dollars' worth of her rubber. We get but little in exchange. Our exports to Brazil are only about one-fifth our imports, and we pay her a balance of about \$48,000,000 a year. If we should stop buying, the officials of some of the best States would go hungry. Pará would have a famine, and São Paulo would have to "patch its pantaloons." The officials of those provinces rely on the revenues from the export business. These are enormous, amounting to 25 cents a pound on rubber, at the present rate of impost, and 11 per cent on the export value of coffee. The duties are of course paid by the consumer, so that every American who rides a rubber-tired bicycle has had to pay 25 per cent into the

treasuries of Pará and Manáos, and everyone who drinks a cup of coffee adds thereby to the support of the government of the coffee-growing States of Brazil.

One would think that Brazil ought to be grateful for this enormous trade; she may be so, but she has a curious way of showing it. She imposes a tariff on everything we sell to her, taxing us on some articles as much as 100 per cent. At times she makes with us what are called reciprocity treaties. Some of our goods go in nominally free, but indirectly every ship carrying American goods that comes to Brazil has to pay toll. In most of the harbours there is what is called *expediente* taxes, which are levies made on some excuse or other. At Bahia the officials will ask the ships to pay so much for a new hospital; at Pernambuco they want something for a sailors' home; and at Rio they may blackmail the ships for harbour improvements. These taxes are levied, not by law, but according to the ideas and tastes of the local officials. They are really a sort of blackmail, the probability being that most of the money goes into the pockets of the collectors. "In fact," said a leading railroad official to me the other day, "every one down here seems to be lying awake at night to plan how he can squeeze a few milreis out of the foreigner without working for them." Every man who goes into business here must expect to pay a tax for the privilege. Every merchant and mechanic in Rio is taxed. The bootblack pays for the right to blacken one's shoes. Every store pays for the privilege of opening its doors, and every contract, note, and check must bear its stamp.

The Brazilians, I find, are rapidly adopting electricity. There are towns of from 10,000 to 15,000 in southern Brazil equipped with electric lights. The city of São Paulo, which has about 200,000 population, is well-equipped in this respect. There is a good electric light system in Pará, although the poles are placed in the centre of the sidewalks; I also found Brush arc lights used in Manáos, 1,000 miles up the Amazon.

At present nearly all the railroads of Rio de Janeiro are moved by horse- or mule-power. The electrical franchises would be worth a great deal. The city is surrounded by suburbs, and the Brazilians, who are a lazy people, would patronize the electric railroads. São Paulo has horse-cars. Pará is arranging for an electric railroad, although the street-cars are still hauled by

mules. Manáos has about completed an electric railroad, which is owned by an American firm. Bahia (200,000) still relies upon horse-cars, although the Germans are manœuvring to get hold of the electric railway franchises.

I am told that a large German syndicate has agents going about through Brazil, picking up everything good in the way of electricity. Already they have their hands to a certain extent on Rio, having built there the Villa Isabella tramway, with the idea of equipping it electrically. They have secured roads in São Paulo and are negotiating for roads in Pernambuco. Pernambuco is flat and car-lines could be operated without much power. The street-car rates are lower, however, than they are with us. The fares are from one and one-half cents to three cents a trip. At the same time labour is very cheap, and most of the lines are operated at a profit. Brazil is growing fast as to its railroads. It now has about 9,000 miles of track, and there is a like extent of mileage under survey or construction. The English own the best of the properties, and they are endeavouring to get hold of others.

At present the government has about 3,000 miles of lines, but they are poorly administered and do not pay. I doubt, indeed, if any business managed by a South American government can ever pay, as every official expects to make a squeeze or a percentage out of all the money that comes into his hands. The losses have been so great that a law has been recently passed authorizing the leasing of the government railroads, and it is probable that they will eventually go into the hands of English capitalists. Most of the Brazilian railways have been constructed under a guarantee from the government of from 6 to 7 per cent on the capital invested, and many of them are now working on that basis.

One of the most profitable roads in the world is that which runs up the mountains from Santos to Jundiahy. This road has paid as much as 50 per cent dividends, and for years it paid 10 per cent semi-annually. The road was first built with a government guarantee of 5 per cent. It had a capital of \$10,000,000, which it soon increased to \$15,000,000, and it has since made its capital \$28,000,000. It is now paralleling its lines in order to accommodate the enormous business that goes over it. It is the only connection which Santos has with the interior, and the enor-



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“THE BEST PAYING RAILROAD IN SOUTH AMERICA”

mous coffee shipments which go out from that port are brought from the plantations over this railroad. The trade of Santos amounts to \$75,000,000 a year. The road shoots out of Santos to the foot of the mountains; here the locomotives are taken off and the cars are dragged up the hills by stationary steam-engines, which wind and unwind immense steel wire cables to which the cars are attached.

On nearly all the roads of Brazil there are first-, second-, and third-class cars. Few of them have sleepers, and the cars, as a rule, are by no means as good as ours. The Brazilian Central has a Pullman system, so that you can go from Rio de Janeiro to São Paulo by sleeper. Most of the trains, however, have only day coaches. The charges for baggage are very heavy. My trunks have usually cost me more than my railroad ticket. Nothing but a single handbag is allowed to be taken into the carriages. The man who brings more is not permitted to pass through the gates until he has handed it over to the express and baggage men; this is very inconvenient, especially as no baggage that looks at all fragile, or that is not carefully wrapped, can be checked.

We should have a line of steamships from New York to Rio de Janeiro and other ports on the east coast of South America. It is along this coast that most of our trade exists with South America, and the trade amounts to much more than \$100,000,000 a year. On nearly every dollar of it we must pay a percentage to the European steamships for freighting the goods. These European companies discriminate against American shippers. Indeed, a number of them have combined against the United States to drive some of the steamers on our side of the Atlantic out of the Brazilian market. They formed a trust not long ago and reduced the freight rates on coffee to about 10 cents a bag. When they had succeeded and had the field to themselves, they again raised the rate to 30 cents a bag. This same combination charges a higher rate on all shipments of goods from New York to Brazil than it does from the European ports to Brazil. Some of the commission merchants of Rio de Janeiro find it more profitable to ship flour from New York to Rio by way of Hamburg, taking it over 3,000 miles of additional ocean travel, and thereby getting a lower rate.

Consul-General Seegar states that one of the leading agricultural houses of São Paulo is forced to buy its iron in Europe, although the prices offered by American houses are lower. This is on account of the heavy freight rates from New York. Flour carried from New York to Rio pays a freight rate of 85 cents per barrel, while flour from Hamburg to Rio pays less than 70 cents per barrel. This system is applied to all sorts of importation, and the same spirit enters into all phases of European competition with the United States. The English and the Germans are intensely jealous of the United States; they fear us commercially, and oppose us at every step. The competition of the Germans is often by unfair methods; they will imitate our trademarks and goods, and often make misrepresentations to increase their business.

To-day the Germans, on the other hand, are the best traders in South America. They are pushing their way into every port, and their merchants are to be found in every town. From Kaiser Wilhelm down they are doing all they can to further the trade interests of their country, and are succeeding. I have written how they have absorbed the trade of the lower provinces of Brazil. I find them in business here at Pará. They own rubber plantations up the Amazon, and have their mercantile houses on the frontiers of Ecuador and Bolivia. They are also doing quite a good deal in banking; they have one bank in Brazil, which has a capital of more than \$2,000,000, and another in Argentina with a capital of \$4,000,000, while there is a third in Chile whose capital is equal to that of the Brazilian bank. I am told that they have been buying nitrate property in Chile recently, and that they have put a great deal of money into railroads in Venezuela. There is no end, moreover, to the small German enterprises. You find coffee-houses here run by them; they have breweries scattered from one end of South America to the other, and the big tanning interests of southern Chile belong to them. They are by far the most active exploiters with regard to opening commercial houses in new centres. I found them selling goods in interior Bolivia and in the mountains of Peru, and have yet to find a city which the German drummers do not visit. These drummers usually speak Portuguese or Spanish. They have spent years in South America, and know the

people and trade thoroughly. They take things easily and are content with small profits. They give from six to nine months credit, and ask for no payment until after receipt of the goods.

There are a number of financial investments down here worthy of investigation. The matter of an American bank is one. Our trade with Brazil annually amounts to more than \$100,000,000, and almost the whole of it is done in European exchange. An American bank at Rio de Janeiro with branches at São Paulo, Santos, Bahia, Pernambuco, Pará, and Manáos could make much money. Interest rates range from ten per cent upward; you can get good loans at one per cent a month and one and one-half, and two per cent are not uncommon. The banks charge for everything; discount rates are high, and all of the European banks, so far as I can learn, are making profitable returns.

It would seem to me that a fortune might be made by a cold-storage company which should put up plants in the larger cities. None of the Brazilian towns have cold-storage houses, and meat and other things cannot be kept from one day to another. I have already referred to Pernambuco which has 200,000 people. The meat sold in the market must be eaten the day it is killed; it must be sold before it begins to spoil, else the market inspectors will condemn it; the result is that the price changes from hour to hour during the day. When the market opens you will see over each butcher's stall a little slate on which is marked the price of meat. As the day wears on the butcher rubs out the figures and changes the prices, so that meat which is worth 8 cents a pound at seven o'clock in the morning is offered for 4 cents a pound at noon. Indeed, dried beef in the market brings more per pound than fresh meat. If there were a cold-storage plant the meat could be kept as long as desired, and vegetables, eggs, and fruit could be stored away to await higher prices.

There are a number of other opportunities here for the investment of capital and good business brains. Brazil as a country has hardly been prospected, and there are vast regions which are yet to be explored. There is only one thing that the investor must consider, and that is that it is not safe to risk any money in South American soil unless he or his agent has been long enough on the ground to understand the local conditions.

With my travels in the Amazon valley I closed my tour of South America, taking passage at Pará on a cargo steamer loaded


with rubber for New York. The journey was a pleasant sea trip of twelve days and was made at a cost of \$90. My South American tour from New York and return, including the many interior trips which I made, has covered more than 25,000 miles of travel. It has been made without great hardships, although not free from annoyances and delays. The expenses at times have been heavy, and at other times comparatively light, averaging for the whole tour a little less than \$10 gold a day.

The time spent in making the journey has been about one year, during which I have visited every South American country, save Venezuela and the Guianas. Venezuela is a republic, and it is interesting to our people as a centre of trade and a land of resources and great possibilities. The information concerning it found in the following chapters is from data furnished the State Department at Washington by prominent Venezuelians whom I met on my travels, and from the latest reports and researches of authentic source. The Guianas have been treated in the same way, my idea being to give a practical view of these countries, thus covering the short gap in my tour and making the book as nearly as I can a complete view of the South American Continent.

CHAPTER LXI

IN THE GUIANAS .

WHERE THE GUIANAS ARE, AND WHAT THEY ARE—THEIR WILD LANDS, AND THEIR SAVAGE INDIANS AND BUSH NEGROES—BRITISH GUIANA, AND ITS MIXED POPULATION—A LAND OF HINDUS, CHINESE, AND NEGROES—ITS RICH SUGAR PLANTATIONS, AND HOW THEY ARE MANAGED—DUTCH GUIANA, THE LITTLE HOLLAND OF SOUTH AMERICA—FRENCH GUIANA, AND ITS PENAL COLONY—A LOOK AT GEORGETOWN, PARAMARIBO, AND CAYENNE.

HE GUIANAS are different from the other countries of South America in that they are colonial possessions of European Powers. British Guiana belongs to Great Britain, Dutch Guiana is owned by Holland, and French Guiana is governed by France. These three countries lie in the northeastern part of South America, and are bounded on the north by the Atlantic, on the east by the valley of the Orinoco, and on the south by the valley of the Amazon. Just where their boundaries end and where they begin is not settled. Each country claims more than Brazil or Venezuela grants to it; altogether more than 100,000 miles are in dispute. Including the disputed territory the total area of the region is about as great as that of Texas, of which British Guiana forms the larger part. None of the countries has been much explored. The only civilized parts are in the valleys of the rivers and along the coast, where the lands are low.

Most of the country is part of a great uplifted section of northeastern South America; so bounded by the Amazon, the Orinoco, the Rio Negro, and the Atlantic ocean it is practically an island. It is not so for practical purposes, however, as in these rivers are falls which impede navigation. Much of the land is high, and not a small part of it is mountainous. Some of it is covered with forests, and other parts are grassy plains or savannas, dotted here and there with clumps of trees. These savannas have rich pastures, the grass being pale green in the rainy season, and yellow and brown in summer. On them cattle

can be fed and they may at some time be the centre of a great stock-raising industry.

On most of the highlands are dense woods. There are trees along every stream, so that the prairie fires which frequently



NATIVE OF ORINOCO

occur are never widespread. The forests are especially rich in fine woods. The Guianas have 30 varieties of palms, and in French Guiana alone there are 260 different species of trees. Among others are those which produce the Brazil nuts, wild cacao trees, incense trees, and trees that make excellent dye-

woods. One tree is good for ship-building, and there are many woods fitted for fine furniture-making. The land is one of many flowers, and it has 150 different species of medicinal plants.

The wild regions of the Guianas are inhabited by savage Indians and negroes. The Indians are chiefly Caribs, of different tribes, who live by hunting and fishing. Among them are wild negroes who fled to the woods at the abolition of slavery and intermarried with the Indians. Other negroes settled in colonies along the banks of the streams and became agriculturists. These are known as bush negroes. They are semi-civilized, and some of them have independent settlements, little republics of their own. They have farms about their villages where they raise produce which they ship down the rivers and sell to the whites along the coast. One of their chief businesses is wood-cutting. They chop down the large forest trees for cabinet wood and lumber, and float them down the river to the sea. These negroes are as a rule sober and hard-working. Some of them worship the Ceiba or cotton tree, placing food at its foot. In many of the villages the citizens have equal rights, each village having a head-man or governor chosen by the people.

The chief interest in the Guianas, however, lies in their civilized colonies. Let us first look at British Guiana. It is the largest, most prosperous, and most civilized of all. It is situated between the rivers Corentyne, which separates it from Dutch Guiana, and the Essequibo, which separates it from Venezuela. It is, as claimed by the British, of about the size of California. This, however, includes the land claimed by Venezuela. The settled region is on the rich lands along the coast and in the river valleys. The soil of these regions is exceedingly rich, being annually added to by the earth-washings of the mountains, which are held in by a system of dykes. The land is especially good for sugar, and it is divided up into great plantations, about seven-eighths of it being devoted to sugar-raising.

Sugar-raising is the chief industry of British Guiana. Sugar comprises five-sixths of its exports, and 90,000 people, about one-third of its population, are employed on the sugar estates. These estates were once cultivated by slaves, but since slavery has been abolished they have been worked by gangs of coolies under contract. One estate not far from Georgetown, for instance, employs 3,700 coolies, and others have on them still larger numbers.

It is the sugar plantations that have made the country largely Asiatic. There are less than 3,000 Europeans among its 280,000 population; the remainder are Asiatics and Africans who were brought here to work on the sugar estates. Over 100,000 of them are East Indians, 4,000 are Chinese, and 99,000 are negroes. The labour is very carefully managed, the plantations being run on strict business principles. Some of them have a capital of more than \$1,000,000. They use modern machinery, add to the



HARVESTING SUGAR CANE NEAR CARÁCAS

richness of the land by fertilizers, and so carefully handle the cane that 16 out of the 17 per cent of sugar in it is saved.

The leading city, and in fact the only city of any size in British Guiana, is Georgetown, at the mouth of the Demerara river. The town runs for a mile along the river, with villas scattered over the plains in the rear. It is a flat town of 53,000 people. It is built largely of wooden houses, with a few buildings of brick and stone. Nearly every house has a wide veranda in front of it, and a wooden or iron tank beside it which serves

as a cistern. The houses are built a little back from the broad streets that cross one another at right angles. The streets are macadamized; many of them have sidewalks of asphalt or cement; while through some of them run small canals, giving the town a fresh and clean look.

There are many large stores and fine public buildings; indeed, you are surprised at the enterprise and culture which you see about you. Georgetown has daily, semi-weekly, and weekly newspapers. It has a telephone service with 514 subscribers, a public library, a museum, and a theatre in which amateur performances are held. Just back of the town is a botanical garden containing about 150 acres, and not far from it are lawn tennis courts and golf grounds.

The excellence of the British colonial system is everywhere to be seen. There are efficient police and good courts. The administration consists of a governor appointed by the Queen, who receives a salary of \$25,000 a year and has an allowance of about \$12,000 for expenses. Then there is a court of policy, a sort of cabinet of the government, comprising eighteen men, eight of whom are elected by the people. There is also what is called the combined court, made up of the court of policy and six financial representatives elected by the people. The combined court is a sort of ways and means committee which votes supplies and passes upon expenditures.

British Guiana has 39 miles of railroad. It has 450 miles of river navigation and 42 telegraph offices. It has 22 savings banks and does a business of about \$14,000,000 a year, the exports being greater than the imports.

Within recent years not only British Guiana, but also Dutch and French Guiana as well, have become prominent as gold producers. In 1885 \$16,000 worth of gold was exported from Georgetown, in 1897 the exports of gold amounted to more than \$2,500,000. A remarkable increase, though not so striking, has taken place in the other Guianas. The gold so far as discovered is placer gold, the camps being situated along the different rivers, but the miners are now pushing their way back from the mountains and prospecting there for the mother lodes of quartz.

In the sixteenth century this territory was looked upon as the richest part of the New World. It was in the Guianas that the famous city, El Dorado, was supposed to be located, a city which,

in the words of Quesada, one of the accomplished liars of that age, was situated in the midst of a great white lake, and ruled by a king who wore garments sprinkled with gold and silver from his sandals to the crown of his head. He had temples far grander than the palaces of the Incas and the Aztecs, his kitchen utensils were of gold and silver studded with diamonds and precious stones, and in his palace were statues of solid gold as big as giants, and birds, fishes, trees, and herbs modelled out of solid gold. According to other accounts, El Dorado was the name of an Indian chief who ruled the city of Manoa, which was somewhat similar to that above described. El Dorado owned vast quantities of gold and precious stones; he had so much gold dust that he was sprinkled with it every morning by his slaves, and at a certain time every year he was smeared with balsam and gold dust, after which he bathed in the lake, in which was then thrown gold and precious stones.

Dutch Guiana lies just east of British Guiana. It is about as large as the State of New York, but its population is only 64,000, not counting the negroes of the forests. The country is ruled by Holland, which has to furnish some money every year to aid in paying the government expenses. It has a governor who is appointed for six years, an assembly elected by the people, and a good system of courts. The laws are those of the Netherlands, the official language is Dutch, although English is in common use in the larger towns.

Its chief city is Paramaribo, situated on the Surinam river, about 20 miles from its mouth. Paramaribo contains about 30,000 people. It is built on a shell reef, and, though it has no sewers, the drainage is good. It extends along the banks of the river for about two miles, running back from the water to the extent perhaps of half a mile. Its houses are wooden, painted gray. They are of two and three stories, having sharply pitched roofs, out of which little dormer windows peep. Nearly every house has a green door and a big brass knocker. Everything is kept clean and the place reminds you of one of the little towns in Holland. The population is largely composed of Javanese and Creoles, the Javanese having been brought to work on the sugar plantations, of which there are nine. Cacao is another industry much engaged in, there being 97 cacao plantations, which produce almost \$1,000,000 worth of cacao a year. The transporta-

tion of the colony is altogether by water, there being no railroads. The steamers of the Royal Mail leave Paramaribo every three weeks for New York, and return from New York every three weeks for Paramaribo. They come from Amsterdam and return there *via* the West Indian ports.

French Guiana amounts to even less than Dutch Guiana. It is merely a convict colony, having little trade and almost no industry. The country imports more than it exports, and its climate is so unhealthy that those who visit it are always anxious to leave. The chief city and capital is Cayenne, a town of 12,000, comprising about half the population of the whole country. The town is on an island, 30 miles in circumference, in the Atlantic, at the mouth of the Cayenne river, close to the coast. It has a wide and safe bay, the island being separated from the coast by a narrow channel. Cayenne is made up of little two-story houses, some of which are of brick covered with stucco. All are painted in bright colours, and with their little dormer windows looking out of the roofs appear clean and pretty. The streets of Cayenne cross one another at right angles. They are lighted at night by oil-lamps and are paraded daily by the vultures, the street-cleaning brigade of the city. The stores are chiefly in the hands of Chinese or Annamese, who give an Asiatic air to the town, and who, with the Creole women, in white turbans and gowns, form the most striking class of the inhabitants. There are about 50 wholesale and 120 retail merchants. There is a weekly newspaper, issued by the government.

The trade of the United States with the Guianas is not a great factor in our commerce. The total imports of the three countries is only a little over \$10,000,000 per annum, of which British Guiana imports \$6,000,000, Dutch Guiana \$2,000,000, and French Guiana about the same. At present our chief trade is with British Guiana, where we send one-fourth of our imports; we have 17 per cent of the imports of Dutch Guiana, and only 6 per cent of those of French Guiana.

CHAPTER LXII

VENEZUELA, AND THE ORINOCO BASIN

AN ENORMOUS COUNTRY OF GREAT POSSIBILITIES—HOW NAMED—ITS SUGAR LANDS AND CACAO ORCHARDS—ITS COFFEE, WHICH WE DRINK AS MOCHA—THE ORINOCO, AND ITS VAST PASTURES—HOW THE LLANOS LOOK—THE GOLD REGIONS—LAKE MARACAIBO—CARÁCAS, THE NATIONAL CAPITAL.



VENEZUELA is yearly coming closer to the United States; our new possessions in the West Indies make her almost a neighbour. We have regular ships that sail from New York to La Guaira, calling at Porto Rico on the way. The trade between the two countries steadily increases. Uncle Sam has now a permanent exposition of American goods at Carácas, and American capital is invited to develop the country. The field is a great one and well worthy of study.

The word Venezuela means Little Venice. The Spaniards who entered Lake Maracaibo about 400 years ago found settlements of Indian fishermen, living in huts built on piles above the water. They were reminded thereby of Venice, so they called the new region "Venezuela" or Little Venice. The country, however, is anything but little. It has an area of one-seventh the size of the United States; it is larger than Germany, France, and Holland combined, and it has so few people that the greater part of it is a wilderness. Its population is about 2,500,000. The people are the offspring of the union of Spaniards with Indians and of pure Indians. The whites number about one-fifth of the whole; they own most of the property and are to a great extent the rulers of the country.

This vast area is a land of mighty mountains, vast plains, and numberless streams. The Andes run through it on the west, other mountains and highlands are found on the east and south, and between the two is the vast valley of the Orinoco, with its natural pastures of millions of acres. In the coast lands and in

the plateaus and highlands of the mountains are the chief agricultural regions of the country, regions devoted to the raising of sugar, coffee, cacao, Indian corn, and other cereals. Coffee is the chief industry, there being 33,000 coffee estates from which 100,000,000 pounds of coffee are annually exported. Of this fully one-half goes to the United States and is sold there as Mocha coffee. It is more difficult to raise coffee here than in Brazil; the plantations must be irrigated and the coffee trees shaded to protect them from the hot sun.



LA GUAIRA, VENEZUELA

The sugar estates and cacao orchards are on the lowlands; there are in all about 11,000 sugar estates and 5,000 cacao orchards. The cacao produced is of a very fine quality. It is grown along the coast where the climate is very unhealthy; most of the product goes to Europe, where it sells from 50 cents to \$1 a pound.

One of the least explored yet most valuable parts of Venezuela is the basin of the Orinoco, which is wonderfully well watered. Rivers and rivulets course through it like the veins

of a leaf. The Orinoco has numberless tributaries. It is the third river in size in South America, and the ninth in size among the great rivers of the world. It is 1,600 miles long and is navigable for steamers for about 800 miles from its mouth, or almost as far inland as Chicago from the Atlantic. It is said to have 4,500 miles of navigable waters, including its own course and its tributaries. It rises in the Andes and flows through central Venezuela into the Atlantic through the llanos, perhaps the greatest pasture-fields in the world. The llanos embrace an area



WASHINGTON PLAZA, CARÁCAS, VENEZUELA

about five times that of the State of Ohio, running on both sides of the river. They are mostly treeless plains, covered with a rich growth of grass, which is green in winter and parched and brown in summer.

Only here and there along the streams are clumps of woods, and about the only part of the lower Orinoco that has trees is the delta. As the Orinoco river approaches the sea, it divides into branches like the ribs of a fan, enclosing a territory about as large as the State of New Jersey. Many of the branches are

deep enough to be navigable, and steamers from the island of Trinidad sail through them into the main stream and go 375 miles farther to Ciudad Bolivar, the metropolis of central Venezuela.

Here the Orinoco narrows. It is only half a mile wide and 360 feet deep, rising 40 feet when in flood. Above this other steamers will take you a distance of almost 500 miles to the Falls of Atures, and in smaller boats you can go almost to the foot of the Andes. You can, in fact, sail out of the Orinoco



• ALL THINGS ARE CARRIED ON DONKEYS •

into the Cassiquiare and down that river into the Rio Negro, which leads to the Amazon. From the Amazon you can sail far into Peru and Bolivia on its various tributaries, or by the Tapajos up to a point so close to the beginnings of the Paraná system that by carrying your canoe a few miles you could get into the Paraguay-Paraná and float down to the Rio de la Plata, thence out into the Atlantic. By a short canal a waterway might thus be made from the edge of the Caribbean sea right down through South America to the Rio de la Plata.

The basin of the Orinoco is devoted chiefly to stock-farming. On the llanos there are in the neighbourhood of 10,000,000 cattle. They are of the long-horned Texas variety, and are raised for their meat and hides. Many of the hides go to the United States. The meat is cut off in strips and made into jerked beef, quantities of which are exported to the different islands of the West Indies. There are practically no dairy interests; indeed, little butter is used outside the cities, and much of that sold in them is imported in tins. Only a small part of the llanos is well-stocked, and the number of animals might be greatly increased. It is estimated that almost one-half of Venezuela is pasture land; many of the high valleys are used for breeding goats, of which there are several million in the country. There are also about 3,000,000 horses and 3,000,000 mules, and not less than 8,000,000 donkeys. The donkeys are the burden-bearers and freight-carriers of the country, and on them the produce is taken to the seaports. You see long trains of them on almost every highway, and they are found by the hundred in and about every town market. In Ciudad Bolivar there are no carriages. The streets are paved, but they are in some places so steep that they are almost dangerous to travel with saddle horses.

Ciudad Bolivar is a town of about 10,000 people. It is made up of one-story buildings, constructed of brick and mud, and covered with plaster painted in all colours of the rainbow. The houses are Spanish in style, and nearly all have roofs of red tiles. There are a number of large stores, a market, a theatre, and a custom-house.

It is in the Orinoco basin that some of the chief gold fields of Venezuela are found, although it is said that there is gold in every one of the States. In the Yuruary region is the mine of El Callao, which produced \$40,000,000 worth of gold between the years 1866 and 1889. It has at times yielded more than \$1,000,000 worth of gold a year, and is still being worked, although the upper levels have been exhausted.

Most of the people of Venezuela live north of the Orinoco. They are to be found cultivating the high plateaus and valleys in the mountains. The country is in the torrid zone, and the lands along the coast are low and tropical, although they are not as hot as some parts of the llanos where there are no sea breezes. The low coast-lands raise all kinds of tropical fruits such as

bananas, pineapples, cocoanuts, and cacao. A little higher up you come into the coffee regions, and in the longitudinal valleys of the Andes you find a climate which is perpetual spring. Here



STATUE OF BOLIVAR, CARÁCAS

grow all sorts of vegetables and fruits, and almost all kinds of cereals. There are many irrigated farms that produce fresh vegetables all the year round. Here are the chief cities such as Carácas, Valencia, Barquisimeto, and Merida, and it is here that

the bulk of the population live. As you go higher up, the climate is colder, until on the tops of the Andes you reach perpetual snow.

Venezuela is especially well off for harbours. It has about 2,000 miles of coast line along the Atlantic and the Caribbean sea, and has 32 natural harbours. At the far west is the Gulf of Maracaibo, opening out into the Lake of Maracaibo, which is about twice as large as Rhode Island and has an average depth of 100 feet, so that the largest ocean vessels can sail in it. It has, however, two bars at its entrance, one of which is only 10½ feet under water, and until these are removed the larger steamers cannot come in. The country about the lake is a rich agricultural region. It produces coffee, cacao, tobacco, rice, cotton, and indigo, besides all sorts of tropical fruits. It is a rich sugar region, and mines of gold, copper, lead, and vast deposits of asphalt and coal are said to be in the mountains near by. The chief town of the region is Maracaibo, near the mouth of the lake. It is a Spanish-built city of about 40,000 people, surrounded by cocoanut groves.

A little farther down the coast is the harbour of Puerto Cabello, a bay so safe that it is called the Port of the Hair, Cabello meaning "hair" and the name signifying that a single hair will hold a vessel at anchor. Still farther to the eastward is the Port of La Guaira, where all the principal steamship lines land, and where the steamers from New York come three times a month. La Guaira lies at the foot of the mountains, the town running for a mile or more round the bay. It is an old town and exceedingly hot, but not unhealthy. It is the port for the capital, Carácas, which is situated on the other side of the mountain, only 6 miles away. It takes, however, 24 miles of railroad travel to reach it, for you have to climb to an altitude of almost a mile to get over the pass into the valley in which Carácas lies. A tunnel might be made through from one city to the other, and a concession to this effect has been granted, but so far no real work has been done.

Carácas lies almost a mile above the sea. It is in a beautiful valley about 2 miles wide and 15 miles long, surrounded by mountains, some of which are 2 miles in height. The valley is covered with sugar plantations, vegetable gardens, and orchards of oranges, lemons, and other fruit. The city contains about

80,000 people; and is one of the liveliest and most enterprising of the South American capitals. It is laid out in squares, with streets crossing one another at right angles, and running out from the Plaza Bolivar in the centre much like the streets of Washington are laid out about the Capitol. There are a number of statues to be seen here and there, among them is one of Simon Bolivar, the founder of Venezuelan independence, and also one of George Washington.



THE CAPITOL AT CARÁCAS

The houses are chiefly of one story. They have thick walls, red-tiled roofs, and iron-barred windows. They are built in the Spanish style about *patios*; most of them are covered with stucco and painted in the most delicate tints of yellow, blue, red, and green. There are no chimneys. The buildings are flush with the street, and from the roofs extend out iron water-spouts to a point about midway over the sidewalk, so that a shower is liable to send a stream down the collar of the passer-by.

Caracas has a large theatre, a national library, a university with schools of law, medicine, theology, and civil engineering,

and cemeteries of the pigeon-hole style, like those of other South American cities. The chief cemetery is called Paradise, so that the man who is buried in it is sure of Paradise, if not of Heaven.

Caracas has a half dozen daily newspapers, the largest of which has a circulation of about 5,000; it has also weekly and monthly periodicals. It has street-cars and electric lights, a telephone exchange, and in fact almost every sort of modern improvement.

It is the seat of the government of Venezuela. Here the President lives, and here congress sits and makes the laws for the country. It is here also that the chief churches are located. Roman Catholicism is the State religion, and numbers among its followers the whole of the population, save about 10,000; of the latter 3,500 are Protestants, and 400 are Jews, the remaining 6,000 being without religious profession.



GARDEN IN CARACAS

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